| IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO | REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED. | IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE. EXCEPT WITH THE | WRITTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER | SAME TO SPERRY RAND CORPORATION, UPON DEMAND |
|---|--|---|--|--|
|---|--|---|--|--|

| | | - | - | | | | | | | | |
|------|------|-------|-----|------|--------------|-------|------|-------|-------------|----|---|
| 0000 | | | | | | | FLO | | | 1. | GADAAD ASSEMBLER PASS 1. |
| 0001 | - | | | | | | | | | TA | BLE OF CONTENTS |
| 0002 | | | | | | | | | | X | C. COPY ROUTINE |
| 0003 | | | | | | | | | | X | G. GET NEXT CARD IMAGE ROUTINE |
| 0004 | | | | | | | | | | X | I. INITIALIZE ROUTINE |
| 0005 | | | | | | | | | | Ŷ | M. MASTER CONTROL ROUTINE |
| 0006 | | | | | | | | | | Ĵ | |
| 0007 | | | | | | | | | | 3 | U. CARD BUFFER UNLOAD CO-ROUTINE |
| 0008 | | | - | | | | | | | X | W. TAPE WRITE ROUTINE |
| 0009 | | | • | | | | | | | 3 | THIS PASS READS CARDS ONTO TAPE. UPDATING |
| 0010 | | | | | | | | | | X | A PREVIOUS TAPE. |
| | | | >- | | | | | | | X | THE SHOW BEGINS AT ROUTINE I. |
| 0011 | | | | | | | | | | X | |
| 0012 | | | | | | | | | | X | ERROR STOPS |
| 0013 | | | ÷ | | | | | | | X | M MEANING |
| 0014 | | | | | | | | | | X | 1 CARD READ COMPARISON ERROR |
| 0015 | | | | | | | | | | X | 2 HSR OFF NORMAL |
| 0016 | | | | | | | | | | X | 5 TAPE WRITE ERROR |
| 0017 | | | 16- | | | | | | | â | 6 TAPE READ ERROR |
| 0018 | | | -6 | | | BBAH | NEW1 | 00001 | 00000 | ^ | O IMPE GEND WILLOW |
| 0019 | | | | | | INIT | EQU | 8999 | 4000 | 2 | START |
| 0020 | | | | | | R0000 | BLR | 4200 | 4419 | G | |
| 0021 | | | | | | 00000 | BLR | 4000 | 4199 | G | TAPE INPUT AREA |
| 0022 | | | | | | | | | 4177 | G | CARO READ AREA |
| 0023 | | | | | | F0000 | COR | 0200 | | G | FIRST STATION AREA |
| | | | | | | C0000 | COR | 0200 | | G | 2ND STATION AREA |
| 0024 | | | | | | 80000 | COR | 0201 | | G | TAPE OUTPUT AREA |
| 0025 | | | | | | E0000 | COR | 0020 | | G | CARD EDIT TARGET AREA |
| 0026 | | | | | | U0000 | COR | 0080 | | 3 | CARD BUFFERS |
| 0027 | | | | | | V0000 | COR | 0040 | | 6 | CARD BUFFERS |
| 0028 | | | | | | 10001 | COR | 0020 | | G | IST STATION UNLOAD TABLE |
| 0029 | | | | | | J0001 | COR | 0020 | | G | 2ND STATION UNLOAD TABLE |
| 0030 | | | | | | 60000 | COR | 0020 | | G | CURRENT INPUT CARD |
| 0031 | | | | | | | HHH | С | | • | |
| 0032 | 8622 | 888 0 | 00 | 8661 | 8642 | U0000 | JMP | U0039 | UQ020 | G | CARD INPUT BUFFER LINKS |
| 0033 | 8642 | 858 0 | 00 | 8681 | 8662 | U0020 | JMP | U0059 | U0040 | _ | CHARLES TO CALL BOTTON |
| 0034 | 8662 | 858 0 | - | B701 | 8682 | U0040 | JMP | U0079 | U0060 | | |
| 0035 | 8682 | 888 0 | | B721 | 8702 | U0060 | JMP | V0019 | V0000 | | |
| 0036 | 8702 | 895 0 | | 8741 | 8722 | V0000 | | | | | |
| 0037 | 8722 | 898 0 | | 8641 | 9622 | | JMP | V0039 | V0020 | | |
| 0038 | 8742 | 888 0 | | | | V0020 | JMP | U0019 | 00000 | | LAT STATION IN ALL BANGOA |
| 9039 | | | | 8014 | 8802 | 10001 | LDL | F0013 | TBIR | 3 | 1ST STATION UNLOAD CONTROL |
| | 8743 | 888 0 | | 8026 | 8802 | 10002 | LDL | F0025 | TBIR | | |
| 0040 | 8744 | 898 0 | | 8038 | 8802 | 10003 | LDL | F0037 | TBIR | | ĝ. |
| 0041 | 8745 | 888 0 | | 8050 | 8802 | 10004 | LDL | F0049 | TBIR | | |
| 0042 | 8746 | 888 0 | | 8062 | 8802 | 10005 | LDL | F0061 | TBIR | | |
| 0043 | 8747 | 888 0 | | 8074 | 8802 | 10006 | LDL | F0073 | TBIR | | |
| 0044 | 8748 | 888 0 | | 8086 | 8802 | 10007 | LDL | F0085 | TBIR | | |
| 0045 | 8749 | 898 0 | 30 | 8098 | 8802 | 10008 | LDL | F0097 | TBIR | | |
| 0046 | 8750 | 888 0 | 30 | 8019 | 8802 | 10009 | LDL | F0018 | TBIR | | |
| 0047 | 8751 | 898 0 | 30 | BQ31 | 8802 | 10010 | LDL | F0030 | TBIR | | |
| 0048 | 8752 | 888 0 | | 8043 | 8802 | 10011 | LDL | F0042 | TBIR | | |
| | | | | | - | | J- 5 | | , T === 433 | | |
| | | | | | | | | | | | |

| 0050 8754 888 0 30 8077 8802 10013 LOL F0066 TBIR 0051 8755 888 0 30 8079 8802 10015 LOL F0078 TBIR 0052 8756 888 0 30 8078 8802 10015 LOL F0078 TBIR 0052 8756 888 0 30 8078 8802 10015 LOL F0111 TBIR 0059 8763 888 0 25 8331 000C J0001 LDA C0118 RX 0058 8763 888 0 25 8331 000C J0001 LDA C0118 RX 0058 8766 888 0 25 8331 000C J0003 LDA C0154 RX 0058 8766 888 0 25 8357 000C J0003 LDA C0154 RX 0059 8767 888 0 25 8357 000C J0003 LDA C0156 RX 0050 8767 888 0 25 8357 000C J0003 LDA C0157 RX 0060 8768 888 0 25 8358 000C J0003 LDA C0150 RX 0060 8769 889 0 25 8324 000C J0008 LDA C0150 RX 0061 8769 889 0 25 8324 000C J0008 LDA C0150 RX 0062 8770 688 0 25 8324 000C J0008 LDA C0150 RX 0063 8771 888 0 25 8324 000C J0019 LDA C0135 RX 0064 8774 888 0 25 8349 000C J0011 LDA C0157 RX 0066 8776 888 0 25 8349 000C J0019 LDA C0135 RX 0066 8776 888 0 25 8349 000C J0019 LDA C0135 RX 0067 8775 888 0 25 8349 000C J0019 LDA C0135 RX 0068 8776 888 0 25 8349 000C J0019 LDA C0135 RX 0068 8776 888 0 25 8349 000C J0019 LDA C0135 RX 0068 8776 888 0 25 8349 000C J0019 LDA C0135 RX 0069 8777 888 0 25 8374 000C J0019 LDA C0135 RX 0069 8777 888 0 25 8374 000C J0019 LDA C0135 RX 0069 8777 888 0 25 8374 000C J0019 LDA C0135 RX 0069 8777 888 0 25 8374 000C J0019 LDA C0135 RX 0069 8776 888 0 26 808 8034 RX 0071 8090 808 0 26 808 8034 RX 0071 8090 808 0 26 808 8034 RX 0071 8090 808 0 26 808 8034 RX 0072 8094 808 0 26 808 8034 RX 0073 8090 808 0 26 808 8034 RX 0074 8090 808 0 26 808 8034 RX 0075 8094 808 0 26 808 8034 RX 0076 8090 808 0 26 808 8034 RX 0077 8094 808 0 26 808 8034 RX 0078 8090 808 0 26 808 8034 RX 0079 8090 808 0 26 808 8034 RX 0080 8010 808 0 26 808 8034 RX 0090 8010 808 0 26 808 R | 0049 | 8753 | 888 0 30 | 8055 | 3802 | 10012 | LDL | F0054 | TBIR | |
|--|------|------------|----------|------|------|------------|-------|--------|-------|--|
| 0051 9756 886 0 30 8079 8902 10014 LOL FOOTB TBIR 0052 9756 886 0 30 8079 8902 10016 LOL FOOTB TBIR 0053 9757 886 0 30 8012 8802 10016 LOL FOOTB TBIR 0054 9762 886 0 25 9311 000C JOO1 LOA CO116 RX 0058 9763 886 0 25 9311 000C JOO2 LOA CO130 RX 0058 9764 886 0 25 9313 000C JOO0 LOA CO130 RX 0058 9764 886 0 25 9317 000C JOO0 LOA CO140 RX 0058 9764 886 0 25 9377 000C JOO0 LOA CO140 RX 0059 9767 886 0 25 8379 000C JOO0 LOA CO140 RX 0069 9767 886 0 25 8379 000C JOO0 LOA CO140 RX 0060 9776 886 0 25 8379 000C JOO0 LOA CO140 RX 0060 9776 886 0 25 8379 000C JOO0 LOA CO140 RX 0060 9777 886 0 25 8379 000C JOO0 LOA CO140 RX 0060 9777 886 0 25 8378 000C JOO1 LOA CO150 RX 0060 9777 886 0 25 8378 000C JOO1 LOA CO150 RX 0060 9777 886 0 25 8384 000C JOO1 LOA CO157 RX 0060 9777 886 0 25 8384 000C JOO1 LOA CO157 RX 0060 9777 886 0 25 8384 000C JOO1 LOA CO157 RX 0060 9777 886 0 25 8384 000C JOO1 LOA CO157 RX 0060 9777 886 0 25 8384 000C JOO1 LOA CO157 RX 0060 9777 886 0 25 8384 000C JOO1 LOA CO157 RX 0060 9777 886 0 25 8384 000C JOO14 LOA CO157 RX 0060 9777 886 0 25 8384 000C JOO14 LOA CO157 RX 0070 8909 936 0 25 800 800 LOA CO159 LOA CO159 RX 0060 9777 886 0 25 8384 000C JOO14 LOA CO157 RX 0070 8909 936 0 25 800 800 LOA CO159 LOA CO159 RX 0070 8909 936 0 25 800 800 LOA CO159 LOA CO159 RX 0070 8909 936 0 25 800 800 LOA CO159 LOA CO159 RX 0070 8909 936 0 25 800 800 LOA CO159 LOA CO159 RX 0070 8909 936 0 25 800 800 LOA CO159 LOA CO159 RX 0070 8909 936 0 25 800 800 LOA CO159 LOA CO159 RX 0070 8000 886 0 0 0 8000 8000 LOA CO159 RX 0070 8000 886 0 0 0 8000 8000 LOA CO159 RX 0070 8000 8000 LOA CO159 LOA CO159 RX 0070 8000 RAN LOA CO159 LOA CO159 RX 0070 8000 RAN LOA CO159 RX 0070 8000 RAN LOA CO159 RX 0070 RAN LOA | 0050 | 8754 | 888 0 30 | B067 | 8802 | | | F0066 | TBIR | |
| 0052 8756 888 0 30 8112 8802 10015 LOL FO090 TBLR 0053 8797 888 0 30 8112 8802 10016 LOL FO111 TBLR 0054 8762 888 0 25 8119 000C JOO01 LOA CO116 RX 0058 8763 888 0 25 8143 000C JOO02 LOA CO116 RX 0058 8763 888 0 25 8143 000C JOO05 LOA CO116 RX 0059 8765 888 0 25 8147 000C JOO05 LOA CO116 RX 0059 8765 888 0 25 8147 000C JOO05 LOA CO116 RX 0059 8767 888 0 25 8147 000C JOO05 LOA CO116 RX 0060 8767 888 0 25 8147 000C JOO05 LOA CO116 RX 0060 8770 888 0 25 8147 000C JOO05 LOA CO116 RX 0060 8770 888 0 25 8147 000C JOO05 LOA CO116 RX 0060 8770 888 0 25 8140 000C JOO05 LOA CO106 RX 0060 8771 888 0 25 8140 000C JOO11 LOA CO114 RX 0060 8771 888 0 25 8140 000C JOO11 LOA CO114 RX 0060 8771 888 0 25 8140 000C JOO11 LOA CO115 RX 0060 8771 888 0 25 8140 000C JOO12 LOA CO117 RX 0060 8778 888 0 25 8140 000C JOO12 LOA CO117 RX 0060 8778 888 0 25 8140 000C JOO12 LOA CO117 RX 0060 8778 888 0 25 8140 000C JOO12 LOA CO117 RX 0060 8778 888 0 25 8140 000C JOO12 LOA CO117 RX 0060 8778 888 0 25 8140 000C JOO12 LOA CO117 RX 0070 870 880 0 25 8140 000C JOO13 LOA CO117 RX 0071 800A 888 0 60 880 800 800A STA NUM 0071 800A 888 0 60 880 800A STA NUM 0078 800A 888 0 60 880 800A STA STA CWR CO17 STATEM OF THE CONTO TO 0 0078 800A 888 0 60 880 800A STA STA CWR CO17 STATEM OF THE CONTO TO 0 0079 800A 888 0 60 880 800A STA STA CWR CO18 STA CWR CO18 STA CWR CO19 STATEM OF THE CONTO TO 0 0070 800A 880 0 80 800 800A STA STA CWR CO18 STA CWR CO18 STA CWR CO19 STATEM OF THE CONTO TO 0 0070 800A 880 0 80 80 80 80 80 80 80 80 80 80 80 | | | | _ | | | | | | |
| 0054 8752 888 0 30 8112 8802 10010 LDL F0111 T81R PX 6 275 8319 000C LO001 LDA C0118 RX 6 276 888 0 25 8331 000C LO003 LDA C0124 RX 7 7 886 0 27 8359 000C LO003 LDA C0124 RX 7 7 886 0 28 8359 000C LO003 LDA C0124 RX 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 | | | · | | | | | | | |
| 0054 9763 888 0 25 8319 000C | | | | | | | | | | |
| 0055 | | | | | | | | | | A 2ND STATION UNLOAD CONTROL |
| 0036 8764 886 0 25 8345 000C J0004 LDA C0134 RX 0057 8766 886 0 25 8357 000C J0006 LDA C0154 RX 0059 8767 886 0 25 8357 000C J0006 LDA C0156 RX 0061 8769 886 0 25 8391 000C J0007 LDA C0157 RX 0060 8769 886 0 25 8327 000C J0008 LDA C0166 RX 0062 8770 888 0 25 8324 000C J0010 LDA C0133 RX 0068 8771 886 0 25 8386 000C J0011 LDA C0133 RX 0068 8773 886 0 25 8386 000C J0011 LDA C0137 RX 0068 8773 886 0 25 8386 000C J0011 LDA C0137 RX 0068 8777 886 0 25 8386 000C J0012 LDA C0137 RX 0068 8777 886 0 25 8386 000C J0013 LDA C0137 RX 0068 8776 888 0 25 8386 000C J0013 LDA C0133 RX 00708 8776 888 0 25 8386 000C J0013 LDA C0137 RX 00708 8776 888 0 25 8386 000C J0013 LDA C0137 RX 00708 8776 888 0 25 8386 000C J0013 LDA C0137 RX 00709 8776 888 0 25 8312 000C J0013 LDA C0137 RX 00709 8776 888 0 25 8312 000C J0013 LDA C0137 RX 00709 8776 888 0 25 8321 000C J0013 LDA C0133 RX 00709 8776 888 0 25 8328 000C J0015 LDA C0137 RX 00709 8776 888 0 25 8312 000C J0015 LDA C0137 RX 00709 8776 888 0 25 8312 000C J0015 LDA C0137 RX 00709 8776 888 0 25 8312 000C J0015 LDA C0137 RX 00709 8776 888 0 25 8312 000C J0015 LDA C0137 RX 00709 8800 888 0 67 8803 8003 800A INIT LDA WROF 0071 800A 888 0 67 8803 800A INIT LDA WROF 0072 800A 888 0 67 8804 801A INIT LDA WROF 0073 803A 888 0 67 8806 805 805A STA SSCT LDA C0011 RX 0077 804A 888 0 60 8808 805A STA SSCT LDA C0014 RX 0077 804A 888 0 60 8808 805A STA SSCT LDA C0014 RX 0078 8805 880 0 60 8801 805A STA SSCT LDA C0014 RX 0080 8810 880 0 60 8818 805A STA SSCT LDA C0014 8000 0000 0000 0000 0000 0000 0000 | | | | | | | | , | | |
| 0057 | | | | | - " | | | | | |
| 0058 | | | - | | | | | | | |
| 0059 8768 888 0 25 8379 000C JO006 LDA C0170 RX 0060 8768 888 0 25 8371 000C JO007 LDA C0190 RX 0061 8769 888 0 25 8324 000C JO008 LDA C0123 RX 0062 8770 688 0 25 8324 000C JO010 LDA C0123 RX 0063 8771 888 0 25 8324 000C JO011 LDA C0117 RX 0063 8772 888 0 25 8336 000C JO011 LDA C0171 RX 0069 8773 888 0 25 8360 000C JO012 LDA C0171 RX 0060 8774 888 0 25 8360 000C JO012 LDA C0171 RX 0060 8776 888 0 25 8364 000C JO018 LDA C0171 RX 0060 8776 888 0 25 8364 000C JO018 LDA C0171 RX 0060 8776 888 0 25 8364 000C JO018 LDA C0171 RX 0070 8999 898 0 25 8369 000C JO016 LDA C0171 RX 0070 8999 898 0 25 8360 800 LDA C0181 RX 0071 8080 888 0 67 8804 801A HLT PASS2 II. INITIALIZE. 0071 800A 888 0 67 8804 801A HLT PASS2 II. INITIALIZE. 0073 801A 888 0 67 8804 801A HLT PASS2 II. INITIALIZE. 0074 802A 888 0 67 8008 805A TRW 0300 II. STA NUM 0079 804A 888 0 60 8805 RDA STA NUM 0089 8010 808 0 60 8805 RDA STA NUM 0089 8010 808 0 60 8807 8010 COM1 00005 00000 0080 8010 808 0 60 8807 8010 COM1 00005 00000 0080 8010 808 0 60 8807 8010 COM1 00005 00000 0080 8010 808 0 60 8817 810A STA NU 0089 8010 808 0 60 8817 810A STA NU 0089 8010 808 0 60 8817 810A STA NU 0089 8010 808 0 60 8817 810A STA NU 0089 8010 808 0 60 8817 810A STA NU 0089 8010 808 0 60 8817 810A STA NU 0089 8010 808 0 60 8818 8019 0 60 8818 | | | | | | | | | | |
| 0000 8768 888 0 25 8391 000C JO007 LDA C0190 RX 0001 8769 888 0 25 8320 00CC JO008 LDA C0006 RX 0002 8771 888 0 25 8346 00CC JO010 LDA C0135 RX 0004 8772 888 0 25 8346 00CC JO110 LDA C0135 RX 0008 8773 888 0 25 8340 00CC JO112 LDA C0197 RX 0008 8774 888 0 25 8340 00CC JO112 LDA C0199 RX 0008 8774 888 0 25 8370 00CC JO112 LDA C0199 RX 0008 8776 888 0 25 8370 00CC JO113 LDA C0191 RX 0008 8776 888 0 25 8370 00CC JO113 LDA C0191 RX 0008 8776 888 0 25 8370 00CC JO114 LDA C0193 RX 0008 8776 888 0 25 8384 00CC JO115 LDA C0193 RX 0009 8777 888 0 25 8322 00CC JO116 LDA C0191 RX 0070 8999 888 0 25 8322 00CC JO116 LDA C0191 RX 0071 800A 888 0 60 8805 802A INIT LDA WROF 0072 801A 888 0 60 8805 802A STA CWR 0073 805A 888 0 60 8806 8066 CLA 0076 805A 888 0 60 8806 806A STA NUM 0077 805A 888 0 60 8808 805A STA SECT 0078 805A 888 0 60 8808 805A STA SECT 0078 805A 888 0 60 8808 805A STA SECT 0078 805A 888 0 60 8808 805A STA SECT 0078 805A 888 0 60 8808 805A STA SECT 0078 805A 888 0 60 8808 805A STA SECT 0078 805A 888 0 60 8808 805A STA SECT 0078 805A 888 0 60 8808 805A STA SECT 0078 805A 888 0 60 8808 805A STA SECT 0078 805A 888 0 60 8808 805A STA SECT 0078 805A 888 0 60 8808 805A STA SECT 0078 805A 888 0 60 8808 805A STA SECT 0078 805A 888 0 60 8808 805A STA SECT 008 8010 888 0 60 8814 806A 9 STA RW2 0080 8010 808 0 60 8814 807A 2 STA WW2 0080 8010 808 0 60 8814 807A 2 STA WW2 0080 8010 808 0 60 8814 807A 2 STA WW2 0080 8010 808 0 60 8814 807A 2 STA WW2 0080 8010 808 0 60 8818 8019 0091 9010 8020 808 0 60 8818 8019 0092 8010 808 0 60 8818 8019 0093 8010 808 0 60 8818 8019 0094 8020 808 0 60 8818 8019 0095 8020 808 0 60 0 8821 8010 0096 8020 808 0 60 0 8820 8020 8020 8020 80 | | | | | | - | | | | |
| 001 8769 898 0 25 8207 000C | | | _ | | | - | | | | |
| 0002 8770 888 0 25 8324 000C J0010 LDA C0135 RX 0004 8772 888 0 25 8334 000C J0011 LDA C0197 RX 0008 8773 888 0 25 8334 000C J0011 LDA C0197 RX 0006 8774 888 0 25 8304 000C J0012 LDA C0197 RX 0006 8774 888 0 25 8304 000C J0012 LDA C0197 RX 0008 8776 888 0 25 8304 000C J0014 LDA C0183 RX 0008 8776 888 0 25 8304 000C J0016 LDA C0111 RX 0008 8777 888 0 25 8322 000C J0016 LDA C0011 RX 0070 8999 888 0 25 8303 800A INIT LDA WROF II. STOP. 0071 0072 800A 888 0 67 8604 801A STA KT RW 0300 LDA C0195 RX 0073 801A 888 0 26 8805 802 803 803A TRW 0300 LDA C0195 RX 0076 800A 888 0 26 8806 8606 CLA STA KT RW 0300 SET STACKER SELECT COUNT TO 0 0077 803A 888 0 26 8809 8810 LDA C0000 CON1 00000 OO000 0080 8810 885 0 60 8811 806A 9 STA SSC SET STACKER SELECT COUNT TO 0 0078 805A 888 0 25 8812 8813 LDA | | | | | | | | | | |
| 0049 8772 888 0 25 8336 000C J0010 LDA C0137 RX 0069 8773 888 0 25 8384 000C J0011 LDA C0199 RX 0069 8773 888 0 25 8372 000C J0013 LDA C0171 RX 0069 8775 888 0 25 8372 000C J0013 LDA C0171 RX 0068 8776 888 0 25 8384 000C J0014 LDA C0183 RX 0069 8777 888 0 25 8324 000C J0015 LDA C0195 RX 0069 8777 888 0 25 8324 000C J0016 LDA C0111 RX 0070 8999 895 0 25 8803 800A INIT LDA WROF II. INITIALIZE. 0071 0072 800A 888 0 67 8808 801A STA CKWR 0078 801A 888 0 72 0300 803A TRW 0300 INIT LDA WROF II. INITIALIZE. 0073 801A 888 0 60 8805 802A STA CKWR 0078 802A 888 0 60 8807 804A STA NUM STA NUM SET STACKER SELECT COUNT TO 0 0076 803A 888 0 60 8807 804A STA NUM SET STACKER SELECT TO POCKET O 0077 804A 888 0 60 8807 804A STA SSCT STACKER SELECT TO POCKET O 0078 805A 888 0 60 8807 804A STA SSCT STACKER SELECT TO POCKET O 0078 805A 888 0 60 8807 804A STA SSCT STACKER SELECT TO POCKET O 0078 805A 888 0 60 8807 804A STA SSCT STACKER SELECT TO POCKET O 0078 805A 888 0 60 8801 805A STA SSCT STACKER SELECT TO POCKET O 0080 8810 888 0 60 8811 806A 9 STA SSCT STACKER SELECT TO POCKET O 0080 8810 888 0 60 8811 806A 9 STA SSCT STACKER SELECT TO POCKET O 0080 8810 888 0 60 8811 806A 9 STA ROOOI 0080 8816 888 0 60 8818 807A 2 STA ROOOI 0080 8816 880 0 60 8818 807A 2 STA ROOOI 0080 8816 880 0 60 8818 8019 STA ROOOI 0080 8816 880 0 60 8818 8019 STA ROOOI 0080 8816 880 0 60 8818 8019 STA ROOOI 0080 8816 880 0 60 8818 8019 STA ROOOI 0080 8816 880 0 60 8818 8019 STA ROOOI 0080 8816 880 0 60 8818 8019 STA ROOOI 0080 8816 880 0 60 8818 8019 STA ROOOI 0080 8816 880 0 60 8818 8019 STA ROOOI 0080 8816 880 0 60 8818 8019 STA ROOOI 0090 8820 888 0 0 60 8821 8823 BB2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | | | | | | - | | | | |
| 0044 8772 888 0 25 8348 000C JO012 LDA CO137 RX 0069 8778 888 0 25 8372 000C JO013 LDA CO137 RX 0066 8778 888 0 25 8384 000C JO013 LDA CO131 RX 0069 8776 888 0 25 8384 000C JO014 LDA CO195 RX 0069 8776 888 0 25 8384 000C JO014 LDA CO195 RX 0069 8777 888 0 25 832 000C JO015 LDA CO195 RX 0069 8777 888 0 25 832 000C JO015 LDA CO195 RX 0070 8999 888 0 25 832 800A INIT LDA WROF 0071 0071 0072 800A 888 0 6 78 803 800A INIT LDA WROF 0078 801A 888 0 6 8035 802A STA CKWR CI 0078 802A 888 0 72 0300 803A TRW 0300 II2. 0079 803A 888 0 86 800 800A STA NUM STA NUM SET STACKER SELECT COUNT TO 0 0077 804A 888 0 6 8807 804A STA SSCT 0078 805A 888 0 25 8809 8810 LDA UNA STA SSCT 0068 8816 88 0 60 8818 805A STA SSCT 0068 805A 806 0 0 8818 805A STA SSCT 0068 805A 806 0 0 8818 805A STA SSCT 0068 805A 806 0 0 8818 807A 2 STA SSCT 0084 807A 808 0 25 8812 8813 LDA UNA STA SSCT 0084 807A 808 0 25 8812 8815 LDA UNA STA SSCT 0085 8815 888 0 0 00 8420 8401 JMP 80019 80000 0085 8815 888 0 60 8817 810A STA KD 0086 816 880 0 60 8817 810A STA KD 0087 8088 809 A 881 0 0 0000 0010 CON STA KD 0099 810A 808 0 60 8817 810A STA KD 0099 810A 808 0 60 8817 810A STA KD 0099 810A 808 0 60 8817 810A STA KD 0099 810A 808 0 60 8817 810A STA KD 0099 810A 808 0 60 8817 810A STA KD 0099 810A 808 0 60 8817 810A STA KD 0099 810A 808 0 60 8817 810A STA KD 0099 810A 808 0 60 8817 810A STA KD 0099 810A 808 0 60 8817 810A STA KD 0099 810A 808 0 60 8817 810A STA KD 0099 810A 808 0 60 8817 810A STA KD 0099 810A 808 0 60 8817 810A STA KD 0099 810A 808 0 60 8817 810A STA KD 0099 810A 808 0 60 8817 810A STA KD 0099 810A 808 0 60 880 817 810A STA KD 0099 810A 808 0 60 8810 800 800 800 800 800 800 800 800 8 | | | - | | | | | | | |
| 0069 8773 888 0 25 8372 000C | | | | | | | | | | |
| October Strain | | | | | | | | | | |
| 0067 8775 888 0 25 8384 000C JO018 | | | | | | | | | | |
| DOG6 | | | | | | | | | | |
| 0069 8777 888 0 25 8212 000C JOO16 LDA COOI1 RX 0070 8999 898 0 25 8803 800A INIT LDA WROF II. STOP. 0071 0072 800A 888 0 67 8804 801A HLT PASS2 MI HALT, IF M RESTART GO TOMPAS2 (W6). 0073 801A 888 0 60 8805 802A STA CKWR CTI 0074 802A 898 0 72 0300 803A TRW 0300 I2. SET STARTING VALUES 0075 803A 888 0 26 8806 8806 CLA 0076 8806 888 0 60 8807 804A STA NUM SET STACKER SELECT COUNT TO 0 0076 880A 888 0 25 8809 8810 LDA 0078 805A 888 0 25 8809 8810 LDA 0079 8809 888 1 00 0050 0000 CON1 00005 00000 0080 8810 888 0 60 8811 806A 9 STA SSW 0081 806A 898 0 25 8812 8813 LDA 0082 8812 888 0 00 8820 8401 JMP 80019 B0000 0083 8813 888 0 60 8814 807A 2 STA WR2 0084 807A 888 0 25 8815 8816 LDA 0085 8815 888 0 00 0000 0010 CON1 00000 00010 0086 809A 888 0 25 8815 8816 CON 0000 0010 CON1 00000 00010 0086 809A 888 0 60 8817 810A STA KO 0089 8100 888 0 60 8817 810A STA KO 0089 8100 888 0 25 8818 819 STA ROO1 0080 810 888 0 25 8815 8116 LDA 0080 809A 888 0 60 8817 810A STA KO 0080 809A 888 0 60 8817 810A STA KO 0080 809A 888 0 60 8817 810A STA KO 0080 809A 888 0 60 8818 819 STA KO 0090 8100 888 0 60 8818 819 STA KO 0090 8100 888 0 00 8821 811A U1 STA LEX 0090 8100 8100 888 0 00 8821 811A U1 STA LEX 0090 8100 8100 8100 8100 8100 8100 8100 | | | | | | | | | | |
| OO70 | | | - | | | | | | | |
| 11 STOP | | | | | | | | | 77.0 | T. INTITALIZE. |
| 0072 800A 888 0 67 8804 801A HLT PASS2 0073 801A 888 0 67 8804 801A TRW 0300 II2. SET STARTING VALUES 0074 802A 888 0 62 8806 866 CLA 0076 803A 888 0 26 8806 8805 CLA 0077 804A 888 0 60 8808 805A STA NUM SET STACKER SELECT COUNT TO 0 0077 804A 888 0 25 8809 9810 CON1 00005 00000 0080 8810 888 0 60 8811 806A 9 STA SSCT 0080 8810 888 0 60 8811 806A 9 STA SSCT 0080 8810 888 0 60 8814 807A 2 STA WR2 0081 8813 888 0 60 8814 807A 2 STA WR2 0084 8815 888 1 00 0000 0010 CON1 00000 0010 0085 8815 888 1 00 0000 0010 CON1 00000 0010 0086 804A 888 0 25 8829 8816 CON1 0000 0010 0086 804A 888 0 25 882 899A LDA 9F 0087 8088 8080 80 80 80 80 80 80 80 80 80 80 | | 0777 | 905 U 23 | 5003 | BUUA | TMT | CDV | RROP | | |
| 0073 801A 888 0 60 8805 802A | | 800 | 220 0 47 | 9404 | 2014 | | T | m. ct2 | | |
| 0074 802A 888 0 FZ 0300 803A TRW 0300 II.2 SET STARTING VALUES 0075 803A 888 0 26 8806 8806 CLA 0076 806A 888 0 26 8807 809A STA NUM 0077 804A 888 0 25 8809 8810 CO 0050 0000 CON1 00005 00000 0080 8810 888 0 25 8819 8813 CO 0050 0000 CON1 00005 00000 0080 8810 888 0 25 8819 8813 CDA 0081 806A 888 0 25 8812 8813 CDA 0082 8812 888 0 00 8420 8401 JMP 80019 80000 0083 8813 888 0 0 25 8815 8816 CDA 0084 807A 888 0 25 8815 8816 CDA 0085 8815 888 1 00 0000 0010 CON1 00000 O010 SET CURRENT TAPE INPUT LINE COUNT TO -10 0086 8816 888 0 0 25 8622 809A LDA U0000 II.3 THEN GO 0086 8816 888 0 60 8817 810A STA KO 0089 810A 888 0 60 8818 8819 STA KI 0099 810A 888 0 60 8818 8819 STA KI 0090 8820 888 0 60 8821 811A U1 STA UEX UNLOAD SECTION 0091 811A 888 0 96 4001 812A HBU D0001 U1. UNLOAD SUFFER 0092 812A 888 0 25 8822 8823 LDA 0095 8824 888 0 30 8825 8826 U2 LDL 0096 8824 888 0 30 8825 8826 U2 LDL 0097 8826 888 0 35 8827 8826 U2 LDL 0097 8826 888 0 35 8827 8826 U2 LDL 0097 8826 888 0 35 8827 8826 U2 LDL 0097 8826 888 0 35 8827 8826 U2 LDL 0097 8826 888 0 35 8827 8826 U2 LDL 0097 8826 888 0 35 8827 8826 U2 LDL 0097 8826 888 0 35 8827 8826 U2 LDL 0097 8826 888 0 35 8827 8826 U2 LDL 0097 8826 888 0 35 8827 8826 U2 LDL 0097 8826 888 0 35 8827 8838 0 90 4000 8824 9 TDC D0000 U2 0097 8826 888 0 35 8825 8826 U2 LDL 0097 8826 888 0 35 8827 8826 U2 LDL 0097 8826 888 0 35 MH MHHH MHHH CON HHHHH MHHHH STATION EMPTY. 0097 8826 888 0 35 MH MHHH MHHH CON HHHHH MHHHH STATION EMPTY. | | | | | | | | | | |
| 0079 803A 888 0 26 8806 8806 CLA STA NUM SET STACKER SELECT TO POCKET O | | - | | _ | | | | | | |
| 0076 8806 888 0 60 8807 804A STA NUM SET STACKER SELECT COUNT TO 0 0077 804A 888 0 25 8809 8810 LDA 9F RESET OUTPUT BUFFER 0078 805A 888 0 25 8809 8810 LDA 2F 0080 8810 888 0 60 8811 806A 9 STA SSW 0081 806A 888 0 25 8812 8813 LDA 2F 0082 8812 888 0 00 8420 8401 JMP 80019 80000 0083 8813 888 0 60 8814 807A 2 STA WR2 0084 807A 888 0 25 8815 8816 LDA 9F 0085 8815 888 1 00 0000 0010 CON1 00000 00010 SET CURRENT TAPE INPUT LINE COUNT TO -10 0086 8816 888 0 60 8817 810A STA K0 CLEAR CARD INPUT BUFFERS 0088 809A 888 0 25 8822 809A STA K0 TO MASTER 0090 8820 888 0 60 8817 810A STA K0 TO MASTER CONTROLBMI. 0091 811A 888 0 96 4001 812A HBU D0001 U1. UNLOAD SECTION 0092 812A 888 0 25 8822 8823 LDA 9F 0093 8822 888 0 00 8400 8824 9 TDC D0000 U2 0099 8820 888 0 80 4000 8824 9 TDC D0000 U2 0099 8824 888 0 0 8400 8824 9 TDC D0000 U2 0099 8825 888 0 80 4000 8824 9 TDC D0000 U2 0099 8826 888 0 0 8400 8824 9 TDC D0000 U2 0099 8826 888 0 0 8400 8824 9 TDC D0000 U2 0099 8826 888 0 0 8400 8824 9 LDA C0006 EMPTIF EMPTY, GO TOMUS. | | | | | | | | 0300 | | |
| 0077 804A 888 0 60 8808 805A | | | | | | | | Alt IM | | |
| 0078 805A 888 0 25 8809 8810 0 0000 CON1 00005 00000 0080 8810 888 0 60 8811 806A 9 STA SSW 0081 806A 888 0 60 8812 8813 | - | | | | | | | | | |
| 0079 8809 888 1 00 0050 0000 | | | | | | | | 3301 | os. | |
| OR | | | | | | | | 00005 | | RESET DOTPOT BOPPER |
| OS SO SO SO SO SO SO SO | | | | | | a | | | 00000 | |
| 0082 8812 888 0 00 8420 8401 JMP 80019 80000 0083 8813 888 0 60 8814 807A 2 STA WR2 0084 807A 888 0 25 8815 8816 LDA 9F 0085 8815 888 1 00 0000 0010 CON1 00000 00010 SET CURRENT TAPE INPUT LINE COUNT TO -10 0086 8816 888 0 60 4201 808A 9 STA R0001 CLEAR CARD INPUT BUFFERS 0087 808A 888 0 25 8622 809A LDA U0000 I3. THEN GO 0088 809A 888 0 60 8817 810A STA K0 TO MASTER CONTROLAMI. 0089 810A 888 0 60 8818 8819 STA K1 MASTR 0090 8820 888 0 60 8821 811A U1 STA UEX U. UNLOAD SECTION 0091 811A 888 0 96 4001 812A HBU D0001 U1. UNLOAD BUFFER 0092 812A 888 0 25 8822 8823 LDA 9F FILL 2ND STATION AREA 0093 8822 888 0 00 8400 8201 JMP C0199 C0000 0094 8823 888 0 30 8825 8826 U2 LDL 9F U2. CHECK 2ND 0095 8824 888 0 30 8825 8826 U2 LDL 9F U2. CHECK 2ND 0096 8825 888 0 HH HHHH HHHH CON HHHHH HHHHH STATION EMPTY. 0097 8826 888 0 25 8207 813A 9 LDA C0006 EMPTIF EMPTY. GO TORUS. | | | | | | y , | | 32# | 25 | |
| 0083 8813 888 0 60 8814 807A 2 STA WR2 0084 807A 888 0 25 8815 8816 LDA 9F 0085 8815 888 1 00 0000 0010 CON1 00000 00010 SET CURRENT TAPE INPUT LINE COUNT TO -10 0086 8816 888 0 60 4201 808A 9 STA R0001 CLEAR CARD INPUT BUFFERS 0087 808A 888 0 25 8622 809A LDA U0000 I3. THEN GO 0088 809A 888 0 60 8817 810A STA KO TO MASTER CONTROL#M1. 0089 810A 888 0 60 8818 8819 STA K1 MASTR 0090 8820 888 0 60 8821 811A U1 STA UEX 0091 811A 888 0 96 4001 812A HBU DO001 U1. UNLOAD SECTION 0092 812A 888 0 25 8822 8823 LDA 9F FILL 2ND STATION AREA 0093 8822 888 0 00 8400 8201 JMP C0199 C0000 0094 8823 888 0 30 8825 8826 U2 LDL 9F U2. CHECK 2ND 0095 8824 888 0 30 8825 8826 U2 LDL 9F U2. CHECK 2ND 0096 8825 888 0 4M HHHH HHHH CON HHHHH STATION EMPTY. 0097 8826 888 0 25 8207 813A 9 LDA C0006 EMPTIF EMPTY. GO TOMUS. | | | | | | | | 20019 | | |
| 0084 807A 898 0 25 8815 8816 | | | | | | 2 | | | 80000 | |
| 0085 8815 888 1 00 0000 0010 | | | | | | • | | #7.A | as | |
| 0086 8816 888 0 60 4201 808A 9 STA R0001 CLEAR CARD INPUT SUFFERS 0087 808A 888 0 25 8622 809A LDA U0000 I3. THEN GO 0088 809A 888 0 60 8817 810A STA K0 TO MASTER CONTROLAMI. 0089 810A 888 0 60 8818 8819 STA K1 MASTR 0090 8820 888 0 60 8821 811A U1 STA UEX U. UNLOAD SECTION 0091 811A 888 0 96 4001 812A HBU DO001 U1. UNLOAD SUFFER 0092 812A 888 0 25 8822 8823 LDA 9F FILL 2ND STATION AREA 0093 8822 888 0 00 8400 8201 JMP C0199 C0000 0094 8823 888 0 80 4000 8824 9 TDC D0000 U2 0095 8824 888 0 30 8825 8826 U2 LDL 9F U2. CHECK 2ND 0096 8825 888 0 HH HHHH HHHH CON HHHHH HHHHH STATION EMPTY. 0097 8826 888 0 25 8207 813A 9 LDA C0006 EMPTIF EMPTY. GO TONUS. | | | | | | | | 00000 | | SET CHRRENT TAPE INPUT LINE COUNT TO -10 |
| 0087 808A 888 0 25 8622 809A | | | | | | 9 | | | 000.0 | |
| 0088 809A 888 0 60 8817 810A STA KO TO MASTER CONTROL#M1. 0089 810A 888 0 60 8818 8819 STA KI MASTR 0090 8820 888 0 60 8821 811A U1 STA UEX U. UNLOAD SECTION 0091 811A 888 0 96 4001 812A HBU DO001 U1. UNLOAD BUFFER 0092 812A 888 0 25 8822 8823 LDA 9F FILL 2ND STATION AREA 0093 8822 888 0 00 8400 8201 JMP C0199 C0000 0094 8823 888 0 80 4000 8824 9 TDC D0000 U2 0095 8824 888 0 30 8825 8826 U2 LDL 9F U2. CHECK 2ND 0096 8825 888 0 HH HHHH HHHH CON HHHHH HHHHH STATION EMPTY. 0097 8826 888 0 25 8207 813A 9 LDA C0006 EMPTIF EMPTY. GO TO#U5. | | | | | | • | | | | |
| 0089 810A 888 0 60 8818 8819 STA KI MASTR 0090 8820 888 0 60 8821 811A U1 STA UEX U. UNLOAD SECTION 0091 811A 888 0 96 4001 812A HBU DOOO1 U1. UNLOAD BUFFER 0092 812A 888 0 25 8822 8823 LDA 9F FILL 2ND STATION AREA 0093 8822 888 0 00 8400 8201 JMP CO199 CO000 0094 8823 888 0 80 4000 8824 9 TDC DOOOO U2 0095 8824 888 0 30 8825 8826 U2 LDL 9F U2. CHECK 2ND 0096 8825 888 0 HH HHHH HHHH CON HHHHH HHHHH STATION EMPTY. 0097 8826 888 0 25 8207 813A 9 LDA CO006 EMPTIF EMPTY. GO TORUS. | | | | | | | | | | |
| 0090 8820 888 0 60 8821 811A U1 STA UEX U. UNLOAD SECTION 0091 811A 888 0 96 4001 812A HBU DOOO1 U1. UNLOAD BUFFER 0092 812A 888 0 25 8822 8823 LDA 9F FILL 2ND STATION AREA 0093 8822 888 0 00 8400 8201 JMP C0199 C0000 0094 8823 888 0 80 4000 8824 9 TDC DOOOO U2 0095 8824 888 0 30 8825 8826 U2 LDL 9F U2. CHECK 2ND 0096 8825 888 0 HH HHHH HHHH CON HHHHH HHHHH STATION EMPTY. 0097 8826 888 0 25 8207 813A 9 LDA C0006 EMPTIF EMPTY. GO TORUS. | | | | | | | | | MASTR | IO HWOILL CAMILLACKING |
| 0091 811A 888 0 96 4001 812A | | | | | | 111 | | | | II. IMIDAD SECTION |
| 0092 812A 88B 0 25 8822 8823 LDA 9F FILL 2ND STATION AREA 0093 8822 88B 0 00 8400 8201 JMP C0199 C0000 0094 8823 88B 0 80 4000 8824 9 TDC D0000 U2 0095 8824 88B 0 30 8825 8826 U2 LDL 9F U2. CHECK 2ND 0096 8825 88B 0 HH HHHH HHHH CON HHHHH HHHHH STATION EMPTY. 0097 8826 88B 0 25 8207 813A 9 LDA C0006 EMPTIF EMPTY. GO TORUS. | | | | | | •• | | | | |
| 0093 8822 888 0 00 8400 8201 JMP C0199 C0000 0094 8823 888 0 80 4000 8824 9 TDC D0000 U2 0095 8824 888 0 30 8825 8826 U2 LDL 9F U2. CHECK 2ND 0096 8825 888 0 HH HHHH HHHH CON HHHHH HHHHH STATION EMPTY. 0097 8826 888 0 25 8207 813A 9 LDA C0006 EMPTIF EMPTY. GO TO#U5. | | | | | | | | 5000- | 05 | |
| 0094 8823 888 0 80 4000 8824 9 TDC D0000 U2 0095 8824 888 0 30 8825 8826 U2 LDL 9F U2. CHECK 2ND 0096 8825 888 0 HH HHHH HHHH CON HHHHH HHHHH STATION EMPTY. 0097 8826 888 0 25 8207 813A 9 LDA C0006 EMPTIF EMPTY. GO TO#U5. | | | | | | | | C0189 | | LIFF SUD SIMITON WERE |
| 0095 8824 888 0 30 8825 8826 U2 LDL 9F U2. CHECK 2ND 0096 8825 888 0 HH HHHH HHHH CON HHHHH HHHHH STATION EMPTY. 0097 8826 888 0 25 8207 813A 9 LDA COOG EMPTIF EMPTY. GO TO#U5. | | | | | | 0 | | | | |
| 0096 8825 888 0 HH HHHH HHHH CON HHHHH HHHHH STATION EMPTY. 0097 8826 888 0 25 8207 813A 9 LDA COO6 EMPTIF EMPTY. GO TORUS. | | | | | | | | | | HO CHECK OND |
| 0097 8826 888 0 25 8207 813A 9 LDA COOCE EMPTIF EMPTY. GO TORUS. | | | | | | UE. | | UUUHU | | |
| AAAA MAA AAAA AAAA | | | | | | • | | | LUUUU | |
| AAAA AAAA BABA AARA IEW US US FULL | | | | | | • | | | 117 | |
| | | 4.74 | 300 G GK | 506/ | 9940 | | 1 5.4 | כט | | FULL |

| 0099 | 5828 | 898 | 0 | 05 | 8829 | B14A | U3 | LDX | 8F | | , |
|--------------|--------------|------------|---|----|--------------|--------------|------|------------|------------|-----------|---|
| 0100 | 814A | 355 | 1 | 08 | 0016 | 8830 | | LIRJ | 0016 | 9F | , |
| 0101 | 8830 | 888 | 1 | 04 | 8741 | 3741 | 9 | JMP3 | 10000 | yr | |
| 0102 | 8802 | 888 | ī | 04 | 8761 | 8761 | TBIR | JMPJ | 10000 | | 1 |
| 0103 | 8829 | 888 | ō | 82 | 8831 | 8832 | 8 | TEQ | 20000 | U6 | , |
| 0104 | 8831 | 888 | ī | OG | 9999 | 615A | ¥ | IIR3 | 9999 | UÐ | |
| 0105 | 815A | 888 | ō | 31 | 8833 | 8833 | | | 7777 | | |
| 0106 | 8833 | 868 | ā | | 8834 | 8830 | | CLL TEQ | 1 1 11 | AB | |
| 0107 | 8834 | 888 | ŏ | 07 | 0600 | 816A | U4 | IIR | 0600 04 | 98 | |
| 0108 | BIGA | 888 | ō | | BIGA | 817A | | ATL | 0000 | | • |
| 0109 | 817A | 888 | ō | 07 | 0001 | AIBA | | IIR | 0001 | | |
| 0110 | 818A | 888 | Q | 70 | 8808 | 819A | | ADD | SSCT | | |
| 0111 | BISA | | ā | 60 | 808 | BZÓA | | STA | SSCT | | |
| 0112 | 820A | 888 | 0 | 82 | B835 | 8836 | | TEO | 555. | 2F | |
| 0113 | 8835 | 888 | Õ | 26 | 8837 | 8837 | | CLA | | ₩. | |
| 0114 | 8837 | 888 | 0 | 60 | 8808 | 821A | | STA | SSCT | | |
| 0115 | BSIA | 888 | 0 | 75 | 8811 | 822A | | SUB | 55# | | |
| 0116 | 822A | 888 | 0 | 60 | 8811 | 8838 | | STA | SSW | 3F | |
| 0117 | 8836 | 888 | 0 | 25 | 8811 | 888 | 2 | LDA | SSW | 3F | |
| 0118 | 8638 | | 0 | 70 | 8839 | AOOO | 3 | ADD | | RA | |
| 0119 | 8839 | | 0 | 47 | 0050 | 4999 | | HSS | 0050 | 4999 | 6 |
| 0120 | 4999 | | | 25 | 8207 | 823A | 4999 | LDA | C0006 | | i |
| 0121 | 823A | 858 | | 60 | 8621 | 324A | | STA | E0019 | | • |
| 0122 | 824A | 858 | | 25 | 8212 | 825A | | LDA | C0011 | | |
| 0123 | 825A | 858 | | 60 | 8620 | 326A | | STA | E0018 | | |
| 0124 | 826A | 888 | | 25 | 8391 | 827A | | LDA | C0190 | | |
| 0125 | B27A | 858 | | 60 | 8619 | ABSE | | STA | E0017 | | |
| 0126 | 828A | | 0 | 25 | 8396 | 829A | | LDA | C0195 | | |
| 0127 | 829A | 868 | | 60 | 9618 | AOCE | | STA | E0016 | | |
| 0128 | 830A | | 0 | 25 | B379 | 831A | | LDA | C0178 | | |
| 0129 | BJIA | | | 60 | 5617 | ASEB | | STA | E0015 | | |
| 0130 | 832A | 888 | | 25 | 8384 | BJJA | | LDA | C0183 | | |
| 0131 | 833A | | 0 | 60 | 8616 | 834A | | STA | E0014 | | |
| 0132 0133 | 834A | | Ŏ | 25 | 8367 | ajsa | | LDA | C0166 | | |
| 0134 | 835A | | | 60 | 8615 | 836A | | STA | E0013 | | |
| 0135 | 836A 837A | 886 | | 25 | 8372 | 837A | | LDA | C0171 | | |
| 0136 | 836A | 856 | | 60 | 8614 | ASCE | | STA | E0012 | | |
| 0137 | BJGA | 888 888 | | | 8355 | 939A | | | CO154 | | |
| 0138 | 8840 | | | | 5840 | 3841 | • | ERS | 9F | 8F | |
| 0139 | 8841 | 868 868 | | OH | HHHH | HHHH | 9 | | ОНННН | HHHHH | |
| 0140 | 840A | 88B | | | 8613 8360 | AOPE | 8 | | £0011 | | |
| 0141 | 841A | 688 | | | | ALPE | | | CO159 | | |
| 0142 | 842A | 988 | | | 8840 8612 | 842A | | | 98 | | |
| 0143 | 843A | 898 | | | 8355 | 843A | | | E0010 | | |
| 0144 | 844A | | | 25 | 8343 | 844A | | | CO154 | | |
| 0145 | 845A | 888 | | | 0900 | 845A 846A | | | C0142 | | |
| 0146 | 846A | 888 | | | 0000 | 347A | | SHR | 0900 | | |
| 0147 | 847A | 888 | | | 0100 | 848A | | | RX | | |
| 0148 | 848A | 688 | | | 8609 | 849A | | SHL STA | 0100 | | |
| | | | • | | # UU 7 | SALE | | 318 | E0007 | | |

U3. COMPARE 2ND STATION
WITH PREVIOUS 1ST STATION FOR CHECK.
ERRIGO TOMUG IF COMPARISON FAILS.
OK:

U4. CHECK FOR 600 CARDS
IF SO SWAP CARD POCKETS O AND 1

G WATCH OUT FOR UNDIGIT GARBLE
US. FILL INTERNAL BUFFER
EDIT 2ND STATION TO E REGION
SEE GADAAD PASS 2. SECTION E FOR OUTPUT
FORMAT

| 0149 | 849A | 888 | 05 | 8360 | 850A | | LOX | C0159 | | |
|--------------|--------------|-------|----|--------------|--------------|------|------------|----------------|-------|--|
| 0150 | BSOA | 898 0 | | 8348 | 851A | | LDA | C0147 | | |
| 0151 | 851A | 898 | | 0900 | 852A | | SHR | 0900 | | |
| 0152 | 852A | 888 | 25 | 0000 | 853A | | LDA | RX | | · |
| 0153 | 853A | 888 | | 0100 | 854A | | SHL | 0100 | | |
| 0154 | 854A | 888 0 | | 8608 | 855A | | STA | E0006 | | |
| 0155 | 855A | 888 0 | | 8343 | 856A | | LDX | C0142 | | |
| 0156 | 856A | 888 0 | 25 | 8331 | 857A | | LDA | C0130 | | |
| 0157 | 857A | 888 0 | 32 | 0800 | 858A | | SHR | 0800 | | |
| 0158 | 858A | 888 0 | 25 | 000C | 859A | | LDA | RX | | |
| 0159 | 859A | 898 0 | | 0100 | 360A | | SHL | 0100 | | |
| 0160 | 860A | 888 | | 8607 | 861A | | STA | E0005 | | |
| 0161 | 861Y | 888 0 | | 8348 | 862A | | LDX | CO147 | | |
| 0162 | 862A | 888 0 | | 8336 | 863A | | LDA | C0135 | | |
| 0163 | 863A | 338 0 | | 0800 | 364A | | SHR | 0800 | | |
| 0164 | 864A | 89B 0 | 25 | 0000 | 865A | | LDA | RX | | |
| 0165 | 865A | 858 | | 0100 | 866A | | SHL | 0100 | | |
| 0166 | 866A | 988 | | 9606 | 367A | | STA | E0004 | | |
| 0167 | 867A | 888 | | 8319 | 868A | | LDA | C0118 | | |
| 0168 | 868A | 888 0 | | 8842 | 9843 | _ | ERS | 9# | 8F | |
| 0169 | 8842 | 888 0 | | нннн | ннно | 9 | CON | ННННН | HHHHO | |
| 0170 | 8843 | 888 0 | | 8605 | 869A | 8 | STA | £0003 | | |
| 0171 | 869A | 888 0 | | 8324 | 870A | | LDA | C0123 | | |
| 0172 | 870A | 888 0 | | 8842 | 871A | | ERS | 98 | | |
| 0173 | 871A | 888 0 | | 8604 | 872A | | STA | E0002 | | |
| 0174 | 972A | 888 0 | | 8844 | 8844 | | CLX | | | |
| 0175 | 8844 | 898 0 | | B603 | 873A | | STA | E0001 | | |
| 0176 0177 | 873A 874A | 858 0 | | 8331 | 874A | | LDX | C0130 | | |
| - 0178 | 875A | 888 0 | | 8319 | 875A | | LDA | C0118 | | |
| 0179 | 876A | 888 0 | | 0700 0000 | 876A 877A | | SHR | 0700 | | |
| 0180 | 877A | 888 0 | | 0600 | 878A | | LDA SHL | RX 0600 | | |
| 0181 | 878A | 888 0 | | B611 | 879A | | STA | £0009 | | |
| 0182 | 879A | 888 0 | | 8336 | SSCA | | LDX | C0135 | | |
| 0183 | BBOA | 888 0 | | 8324 | 881A | | LDA | C0153 | | |
| 0184 | BBIA | 888 0 | | 0700 | 882A | | SHR | 0700 | | |
| 0165 | 882A | 888 0 | | 0000 | 883A | | LDA | RX | | |
| 0186 | 883A | | 37 | 0600 | 884A | | SHL | <u> ဂ</u> ိ600 | | MOVE REGION E TO NEXT |
| 0187 | 884A | 888 0 | | 8610 | 8845 | | STA | E0008 | BLST | FREE CARD INPUT BUFFER |
| 0168 | 8845 | 888 0 | | 8846 | 3847 | BLST | LDA | | 9F | the state of the s |
| 0189 | 8846 | 888 0 | | 8621 | 8602 | | JMP | E0019 | E0000 | |
| 0190 | 8847 | 888 0 | 88 | 4400 | 885A | 9 | TCD | R0200 | | |
| 0191 | 885A | 888 0 | 25 | 8818 | 886A | | LDA | K1 | | |
| 0192 | 886A | 388 O | | 8848 | 8849 | | ADD | | 9F | |
| 0193 | 8848 | 888 0 | 00 | 0000 | 0001 | | CON | 00000 | 00001 | |
| 0194 | 8849 | 888 0 | | 4401 | 887A | 9 | TDC | R0201 | | |
| 0195 | 887A | 888 0 | | 8618 | ASSS | | LDA | K1 | | |
| 0196 | ASSB | 888 0 | | 8850 | 8851 | | ER5 | | 9F | • |
| 0197 | 8850 | 888 0 | | 0000 | НННН | _ | CON | 00000 | OHHHH | |
| 0198 | 8851 | 888 0 | 37 | 0400 | 889A | 9 | SHL | 0400 | | THEN CYCLE EMPTY BUFFER CONTROL LINK KI. |
| | | | | | | | | | | |

| 0199 | 889A | 888 | 0 20 | 8852 | QOOA | | BUF | | 0.4 | | |
|------|------|------------|------|------|------|-------------------|------|-------|--------------------|---------|--|
| 0200 | 8852 | | 0 25 | 0000 | 890A | | | 0000 | RA | | |
| 0201 | 890A | | 0 60 | 8818 | 8827 | | LDA | 0000 | | | |
| 0202 | 8827 | 888 | | 8853 | 3854 | U5 | STA | K1 | U5 | | |
| 0203 | 8853 | 858 | | 8200 | 9001 | 03 | LDA | #5100 | 9F | U6 (| MOVE STATION 1 |
| 0204 | 8854 | 888 | | 4000 | 3821 | 9 | JMP | F0199 | F0000 | | TO 1ST STATION AREA. THENHEXIT. |
| 0205 | 8832 | 888 | | 0200 | | | TDC | D0000 | UEX | | |
| 0206 | BOLA | 688 | | 0001 | 891A | U6 | HSS | 0200 | 4.100.4 | U7 . | SELECT STACKER 2 |
| 0207 | W-2~ | 656 | 3 6, | 0001 | 9851 | | HLT | 0001 | UEX | | BEGINNING WITH BAD COMPARISON CARD. HALT. |
| 0208 | 8855 | 886 | | 2020 | 9534 | • | | | | X | THENNEXIT. |
| 0209 | 892A | 388 | | 8820 | 892A | 61 | HBT | U1 | | G. | FETCH NEXT CARD SECTION |
| 0210 | 8856 | 388 | | 8856 | 3856 | | CLA | | | G1 . | RESET TIMER |
| 0211 | 8858 | 858 | | 8857 | 8858 | • • | STA | T | 62 | | FOR OFF NORMAL |
| 0212 | 8859 | | | 8859 | 8860 | 62 | HCC | | -63 | G2. | TRY TO FEED A CARD |
| 0213 | 8860 | 858 | | 8820 | 8858 | | HBT | U1 | 62 | OFF | FILE OFF NORMAL GO TONGS. |
| 0514 | 893A | 888 (| | 8817 | 893A | -63 | LDA | KO | | ON | |
| 0215 | 894A | 898 | | 8818 | 894A | | LDL | K1 | | G3. | CHECK BUFFERS. |
| 0216 | | 888 (| | 8862 | 8863 | | TEQ | | G4 | | TIF BUFFERS ARE EMPTY GO TONGE |
| 0217 | 8862 | 88B (| | 8820 | 3858 | _ | HBT | UI | G2 | | AND FEED ANOTHER CARD. |
| 0218 | 8863 | 858 (| | 4400 | 895A | G4 | TCD | R0200 | | ONE | 1 |
| | 895A | 888 | | 9864 | 8865 | | ERS | | 9F | | MOVE NEXT IMAGE |
| 0219 | 8864 | 888 (| | 0000 | HHHH | | CON | 00000 | ОНННН | | TO AREA G. |
| 0220 | 8865 | 898 (| | 0400 | 896A | 9 | SHL | 0400 | | | A MINER MA |
| 0221 | 896A | 888 | | 8866 | QOOA | | SUF | | RA | | |
| 0222 | 8866 | 398 (| | 0000 | 897A | | LDA | 0000 | | | |
| 0223 | 897A | 888 | | 8817 | 398A | | STA | KO | | | THEN CYCLE FULL BUFFER CONTROL LINK KO. |
| 0224 | 898A | 888 | | 8867 | 8868 | | LDA | | 9F | | AFTER THATPEXIT. |
| 0225 | 8867 | 888 | | 9801 | 8782 | | JMP | G0019 | 60000 | | And the state of t |
| 0226 | 8868 | 888 | | 4400 | 899A | 9 | TDC | R0200 | | | |
| 0227 | 899A | 988 (| | 8820 | 900F | | HBT | UI | | | |
| 0228 | BOOF | 898 (| | 0000 | 0000 | | JMP1 | 0000 | | | |
| 0229 | 8861 | 888 0 | | 0150 | 801F | 4G3 | IIR | 0150 | | G5. | STEP TIMER |
| 0230 | HOIF | 888 | | 801E | 802F | | ATL | | | | STEP THE OFF NORMAL TIMER. |
| 0231 | 802F | 888 | 07 | 0001 | 303F | | IIR | 0001 | | 150 | FIF TOO LONG STOP. |
| 0232 | 803F | 888 0 | | 8857 | 804F | | ADD | T | | 4.50 | THEN TRY AGAIN BY GOING TORGI. |
| 0233 | 804F | 888 0 | | 8857 | 305F | | STA | T | | OK : | OTHERWISE GO TOMES AND EMPTY A BUFFER. |
| 0234 | 805F | 98B 0 | | 0000 | 306F | | LDX | 0000 | | G | SYNCHRONIZE LOOP WITH DRUM |
| 0235 | 806F | 888 0 | 82 | 8869 | 8860 | | TEO | | -G3 | • | A LIGHT COOP #114 DROW |
| 0236 | 3869 | 888 0 | | 0002 | 3855 | | HLT | 0002 | G1 | | |
| 0237 | 8870 | 898 0 | | 0150 | 807F | STOP | IIR | 0150 | • • | s. | STOP ROUTINE |
| 0238 | 807F | 888 0 | | 807F | 808F | | ATL | | | | SHUT DOWN READER |
| 0239 | 808F | 888 0 | | 8871 | 9871 | | CLA | 2F | | 947 | |
| 0240 | 8871 | 88B 0 | | 0000 | 309F | 2 | TEQ1 | | | | COUNT TO 150 TO MAKE SURE ALL COMMITTED CARDS HAVE BEEN READ. |
| 0241 | 809F | 888 0 | | 8872 | 310F | | HBT | 1F | | | THEN#EXIT. |
| 0242 | Blof | 888 0 | | 0000 | 811F | | LOX | 0000 | | G | |
| 0243 | 811F | 858 0 | 70 | 8873 | 8871 | | ADD | **** | 28 | • | SYNCHRONIZE LOOP WITH DRUM |
| 0244 | 8873 | 888 0 | 00 | 0001 | 0000 | | | 00000 | 10000 | | |
| 0245 | 8872 | 888 0 | | 8820 | 8870 | 1 | | UI | STOP | | |
| 0246 | 8810 | 888 0 | | 8874 | 8855 | MASTR | | MASTI | G1 | Ma | MASTER PROCESS CONTROL |
| 0247 | 8874 | 888 0 | | 8790 | | MAST1 | | G0008 | ~ - | | FETCH A CARD |
| 0248 | 812F | 888 0 | 30 | 8875 | | - · · · · · · · · | LDL | | 2F | i.d.♥ ♠ | BY GOING TO SECTION G. |
| | | | | | _ | | | | . *** * | | BI GOTIAG TO SECTION A. |

| 0249 | 8875 | 888 0 11 | 2000 | 0000 | | ZON | FIN O | 00000 | |
|--------|-------------|----------|------|---------------|------|------|----------|-------------|--|
| 0250 | 3676 | 888 0 82 | 8877 | 3878 | 2 | TEO | | 3F | M2. CHECK FOR FIN |
| 0251 | 8877 | 888 0 25 | 8791 | 813F | | LDA | G0009 | | FINITE SO SET LINE NUMBER TO SENTINEL |
| 0252 | 813F | 888 0 30 | 8879 | 8880 | | LDL | | 2F | AND WRITE TAPE ATAWI. |
| 0253 | 8879 | 888 0 69 | 5800 | 0000 | | | FIN 0 | 00000 | NO: |
| 0254 | 8880 | 888 0 82 | 8881 | 3882 | 2 | TEQ | , | 4F | |
| 0255 | 8881 | 888 0 25 | 8883 | 8884 | _ | LDA | | 2F | |
| 0256 | 3883 | 888 0 99 | 9999 | 9999 | | CON | 99999 | 99999 | |
| 0257 | 8884 | 888 0 60 | 8807 | 8885 | 2 | STA | | | |
| 0258 | 8878 | 888 0 30 | B886 | 8887 | 3 | | NUM | WRITE 2F | M3. CHECK FOR CPY |
| 0259 | 6886 | 858 0 12 | 3000 | 0000 | , | LDL | 48V 0 | | |
| 0260 | | | | | • | ZON | CPY O | 00000 | CPY: IF SO JUMP TO COPY ROUTINERCI. |
| | 8887 | 888 0 82 | 8888 | 8882 | 2 | TEQ | ~~~~ | 4F | NO : |
| 0261 | 8888 | 898 0 25 | 8791 | 814F | | LDA | 60009 | ~= | |
| 0262 | 814F | 888 0 30 | 8889 | 8890 | | LDL | | 2F | |
| 0263 | 8889 | 888 0 37 | 8800 | 0000 | _ | | CPY O | 00000 | |
| 0264 | 8890 | 858 0 82 | 8891 | 8882 | 2 | | COPY | 46 | 3411 MARIE A 2418 |
| 0265 | 3882 | 888 0 08 | 8819 | 8885 | 4 | LIRI | MASTR | WRITE | M4. WRITE LINE |
| 0266 | | | | | | | | | X THIS IS A CARD TO BE PROCESSED BY PASS 2 SO |
| 0267 | | | | | | | | | X WE WRITE IT OUT, USING ROUTINE W. AND GO |
| 0268 | | | | | | | | | X BACK TOMM1. |
| 0269 | 8891 | 888 0 08 | 8892 | 8870 | COPY | LIRI | 5F | STOP | C. COPY OLD TAPE |
| 0270 | 8892 | 888 1 02 | 8893 | 8805 | 5 | LIR2 | 6F | CKWR | C1. STOP THE READER |
| 0271 | 8893 | 888 0 25 | 8787 | 315F | 6 | LDA | G0005 | | ROUTINE S. |
| 0272 | 815F | 888 0 05 | 8789 | 816F | - | LDX | 60007 | | C2. CHECK PREV WRITE |
| 0273 | B16F | 888 0 32 | 0500 | 817F | | SHR | 0500 | | AT #50. |
| 0274 | 817F | 888 0 60 | 8894 | 818F | | STA | FRST | | C3. SET UP FIRST.LAST |
| 0275 | 818F | 858 0 65 | 8895 | 3896 | | STX | LST | -CP | LINE NUMBERS FOR OLD TAPE. |
| 0276 | 8896 | 888 0 30 | 4201 | 819F | -CP | LDL | R0001 | | |
| 0277 | 819F | 888 0 25 | 8894 | 820F | -61 | LDA | FRST | | C4. FIRST:CURRENT Lessif first is less than current go torc6. |
| 0278 | 820F | 888 0 35 | 8898 | 3399 | | ERS | FROI | 2F | |
| 0279 | 8898 | 888 0 00 | 0000 | HHHO | | CON | 00000 | OHHHO | EQL IF FIRST EQUALS CURRENT GO TO#C8. GTR |
| 0280 | 8899 | 888 0 82 | 8900 | 8901 | 2 | | | 8F | 31175 |
| 0281 | 8901 | 858 0 87 | 8902 | 8903 | 8 | TEQ | 3F 9F | 9F | |
| 0282 | 8902 | | | | | TER | - , | 47 | AR MELA BLAR KAMBENA |
| 0283 | 821F | 888 0 GZ | 0200 | 821F | 9 | TRD | 0200 | | C5. READ TAPE FORWARD |
| | | 888 0 C7 | 8902 | 822F | | TBT | 98 | | OK! THEN GO BACK TONC4. |
| 0284 | 822F | 898 0 C7 | 8904 | 322F | | TBT | | • | BAD! |
| 0285 | 8904 | 888 0 26 | 8905 | 8905 | | CLA | | | IF ERROR ON TAPE READ! HOWEVER! HALT AND |
| 0286 | 8905 | 888 0 82 | 8906 | 8897 | | TEO | | &CP | REVERSE DIRECTION |
| 0287 | B906 | 888 0 F6 | 4200 | 8896 | | , | R0000 | -CP | |
| 0288 | 8897 | 888 0 67 | 0006 | 8903 | &CP | HLT | 0006 | 4F | |
| - 0289 | 8903 | 888 0 G2 | 0205 | 823F | 4 | TRD | 0205 | | C6. READ TAPE BACKWARD |
| 0290 | 823F | 888 0 C7 | 8907 | 32 3 F | | TBT | | * | BADIIF ERROR REVERSE DIRECTION ATMCS. |
| 0291 | 8907 | 888 0 26 | 8908 | 809E | | CLA | | | OK 8 |
| 0292 | 8908 | 888 0 82 | 8909 | 8911 | | TEQ | | &CPP | |
| 0293 | 8909 | 888 0 F6 | 4200 | 3910 | | TBU | R0000 | -CPP | |
| 0294 | 8910 | 888 0 25 | 8894 | 824F | -CPP | LDA | FRST | | C7. RECOMPARE |
| 0295 | 824F | 888 0 35 | 8912 | 8913 | | ERS | | 2F | LESSIF FIRST IS STILL LESS THAN CURRENT. GO TOMCO |
| 0296 | 8912 | 888 0 00 | | | | | 00000 | ОНННО | EGL IF THEY ARE EQUAL. REREAD FORWARD ATMCS. |
| 0297 | 8913 | 888 0 30 | | | 2 | | R0143 | | GTR IF GREATER. WE ALSO GO TONCS (PROBABLY A BAD |
| 0298 | | | | | - | | 110675 | | X MACHINE ERROR) |

| 0299 | 825F | 888 | 0 82 | 8902 | 8901 | | TEQ | 98 | 8 B |
|------|---------------|-----|------|------|----------------------|---------------|------|--------------|--------------|
| 0300 | 8911 | | 0 67 | 0006 | 8902 | &CPP | HLT | 0006 | 98 |
| 0301 | 8900 | | 0 25 | 8894 | 826F | 3 | LDA | FRST | |
| 0302 | 826F | | 0 35 | 8914 | 8915 | | ERS | 11101 | 2F |
| 0303 | 3914 | | 0 00 | 0000 | 000H | | CON | 00000 | 0000Н |
| 0304 | 8915 | | 0 37 | 0500 | 827F | 2 | SHL | 0500 | 000011 |
| 0305 | 827F | | 0 70 | OOOA | 828F | 166 | ADD | RA | |
| 0306 | 828F | | 0 70 | 8916 | 8917 | | ADD | | 1F |
| 0307 | 8916 | | 0 80 | 4200 | 8918 | MAY | | MOV ROOOO | |
| 0308 | 8917 | | 0 60 | 8919 | | MOV | TDC | | WRIT2 |
| 0309 | 829F | | 0 25 | 8920 | 829F | 1 | STA | WRITI | 30171 |
| 0310 | 8920 | | 0 00 | 8801 | 8919 8782 | | LDA | G0019 | WRIT1 |
| 0311 | 8918 | | | | | WBIT 2 | JMP | | G0000 |
| 0312 | 0110 | 200 | 0 08 | 8921 | 8885 | WRIT2 | LIRI | 5F | WRITE |
| 0313 | 8921 | 888 | 0 25 | Baan | 2106 | * | | | |
| 0314 | | | | B894 | 830F | 5 | LDA | FRST | |
| | 830F | | 0 30 | 8895 | 331F | | LDL | LST | |
| 0315 | 831F | 688 | 0 70 | 8922 | 832F | | ADD | ONE | |
| 0316 | G 3 6 F | *** | . A. | ~~~ | | | | | |
| 0317 | 832F | | 0 87 | 8819 | 833F | | TGR | MASTR | |
| 0318 | 833F | | 0 60 | 8894 | 3923 | * | STA | FRST | 5F |
| 0319 | 8923 | | 0 25 | 8919 | 834F | 5 | LDA | WRITL | |
| 0320 | 834F | | 0 70 | 8924 | 835F | | ADD | M20 | |
| 0321 | 835F | | 0 30 | 8925 | 8926 | | LDL | | 2F |
| 0322 | 8925 | | 0 80 | 4400 | 8918 | | TDC | R0200 | WRIT2 |
| 0323 | 8926 | | 0 82 | 8902 | 8917 | 2 | TEO | 98 | 18 |
| 0324 | 8924 | | 0 00 | 0020 | 0000 | M20 | CON | 00002 | 00000 |
| 0325 | 8922 | | 0 00 | 0000 | 0001 | ONE | CON | 00000 | 00001 |
| 0326 | 8885 | | 0 42 | 8820 | 836F | WRITE | HBT | U1 | |
| 0327 | 836F | | 0 25 | 8807 | 837F | | LDA | NUM | |
| 0328 | 837F | | 0 60 | 8783 | a 38 F | | STA | G0001 | |
| 0329 | 838F | 888 | 0 31 | 8927 | 8927 | | CLL | | |
| 0330 | 8927 | | 0 50 | 8782 | 839F | | STL | 60000 | |
| 0331 | 8 39 F | 888 | 0 70 | 8922 | 8928 | | ADD | ONE | 一個代 |
| 0332 | 8928 | | 0 60 | 8807 | 8930 | -WR | STA | NUM | WR4 |
| 0333 | 8930 | 888 | 0 25 | 8931 | 8932 | WR4 | LDA | | 1F |
| 0334 | 8931 | 888 | 0 00 | 8801 | 8782 | | JMP | G0019 | 60000 |
| 0335 | 8932 | | 0 88 | 4000 | 940F | 1 | TCD | 00000 | |
| 0336 | 840F | 355 | 0 25 | 8814 | 841F | | LDA | WR2 | |
| 0337 | 841F | 888 | 0 30 | 8933 | 8934 | | LDL | 9# | 1F |
| 0338 | 8933 | 888 | 0 00 | 8600 | 3581 | 9 | JMP | 80199 | 80180 |
| 0339 | 8934 | 888 | 0 80 | 4000 | 342F | 1 | TDC | 00000 | |
| 0340 | 842F | 888 | 0 82 | 8935 | 843F | | TEO | 1F | |
| 0341 | 843F | 888 | 0 70 | 8936 | 844F | | ADD | TWTW | |
| 0342 | 844F | | 0 60 | 8814 | 845F | | STA | WR2 | |
| 0343 | 845F | | 0 42 | 8820 | 846F | | HBT | U1 | |
| 0344 | 846F | | 0 04 | 0000 | 0000 | | JMP1 | 0000 | |
| 0345 | 8935 | | 0 25 | 8937 | 8938 | 1 | LDA | 8F | 1F |
| 0346 | 8937 | | 0 00 | 8420 | 8401 | 8 | JMP | 80019 | 80000 |
| 0347 | 8938 | | 0 60 | 8814 | 847F | ī | STA | WR2 | |
| 0348 | 847F | 388 | | 8820 | 848F | - | HBT | Uı | |
| | | | | | | | 1 | - • | |

C8. MOVE TO OUTPUT.

MOVE A RECORD FROM THE OLD TAPE TO
WORKING STORAGE (REGION G).

C9. THEN WRITE IT OUT

X THE OLD TAPE IS NOW POSITIONED TO WRITE
PROPERLY. USE SECTION W TO WRITE OUT A LINE.
INCREMENT 'FRST' AND CHECK FOR END.

DONEIF DONE WITH THIS COPY CARD. GO BACK TO MASTER

X CONTROL#MI

MORE
C10.CHECK INPUT BUFFER
EMPTIF EXHAUSTED READ ANOTHER RECORD AT#C5.

OK OTHERWISE GO BACK TOWOR.

W. TAPE WRITE CONTROL SECTION.
WI. SET LINE COUNT.
AND INCREMENT
FIN: IF SENTINEL JUMP TOWW4.
OK:
W2. PLACE IN BUFFER
THEN CHECK FOR BUFFER FULL.
OK: IF NOT. WEXIT.
FULL

| 0350 849F 888 0 60 8601 850F STA 8020C 0351 850F 885 0 00 0020 0020 TWT CON 00002 0020 0352 8599 889 0 10 0020 0020 TWT CON 00002 1F 0353 8599 889 0 10 000 0020 055 TBL 80001 1F 0353 8596 889 0 12 8940 8940 TST TST TF 0355 851F 885 0 25 8941 8940 HBT U1 1B 0357 8942 885 0 25 8943 852F T LDA WRON 0358 82F 885 0 04 0000 0000 000 | 0349 | 848F | 888 0 25 | 8401 | 349F | | LDA 8 | 0000 | | |
|---|------|------|----------|------|------|-------|---------|------|-------------|--|
| 0352 8936 888 0 00 0020 0020 TWTW CON 00002 00020 0353 8940 888 0 C 68 802 8940 5 18L 80001 IF LOAD THE 8UFFER. WRITE, AND SET THE 0354 8940 888 0 C 62 8941 8942 1 TST 0355 8941 888 0 C 22 8941 8940 C HBT UI 18 0357 8942 888 0 25 8944 893 325 7 LDA WRON 0358 852F 888 0 0 04 0000 0000 0358 852F 888 0 0 04 0000 0000 0359 852F 888 0 0 04 0000 0000 0350 8929 888 0 0 04 0000 0000 0350 8929 888 0 0 04 0000 0350 8929 888 0 0 04 0000 0350 8929 888 0 0 04 0000 0350 8929 888 0 0 04 0000 0350 8929 888 0 0 04 0000 0350 8929 8945 888 0 0 04 0000 0350 852F 888 0 0 04 0000 0350 852F 888 0 0 05 8947 8870 0350 852F 888 0 0 05 8947 8870 0350 8945 888 0 0 05 8947 8870 0350 8945 888 0 0 05 8947 8870 0350 8945 888 0 0 05 8947 8870 0350 8945 888 0 0 0000 856F 5 TSL 80001 5F 0350 8947 888 0 0 0 0000 856F 5 TSL 80001 5F 0350 8945 888 0 0 0 0000 859F 7 TST 588 0350 855F 888 0 0 0 0000 859F 7 TST 588 0350 885F 888 0 0 0 0000 859F 7 TST 588 0350 885F 888 0 0 0 0000 859F 7 TST 588 0350 885F 888 0 0 0 0000 859F 7 TST 588 0350 885F 888 0 0 0 0000 859F 7 TST 588 0350 885F 888 0 0 0 0000 859F 7 TST 589 0350 885F 888 0 0 0 0000 859F 7 TST 588 0350 885F 888 0 0 0 0000 859F 7 TST 588 0350 885F 888 0 0 0 0000 859F 7 TST 588 0350 885F 885 0 0 0 8959 8595 8595 8595 8595 8595 | 0350 | 849F | 888 0 60 | 8601 | 850F | | STA B | 0200 | | |
| 0353 8930 888 0 C6 8402 8940 5 T6L 80001 IF | 0351 | 850F | 888 1 02 | 6939 | 3805 | | LIR2 5 | F | CKWR | W3. CHECK PREV WRITE |
| 0353 8930 886 0 £0 3000 851F 1 THE 0300 1F LOAD THE BUFFER. WRITE. AND SET THE 0350 0354 8940 886 0 £2 3000 851F 1 THE 0300 CHECKINS SWITCH ON. THE NEWEXIT. 0355 8918 888 0 £2 8943 8820 8940 HBT U1 1B 0358 832F 7 LOA WRON 0358 832F 888 0 £0 885 835F 7 STA CKWR 0360 8929 888 0 £0 8894 8930 AWR LIR1 0000 0360 8948 885 0 £0 8894 8930 AWR LIR1 0000 0360 8945 888 0 £0 8945 885F 885 0 \$10 8944 8930 AWR LIR2 STOP 0366 8948 885 0 £0 8945 8855 STA CKWR 0366 8948 886 0 £0 8945 885F 5 TBL 8001 5F 0366 8948 886 0 £0 2000 856F 5 TBL 8001 5F 0367 8945 886 0 £0 2000 856F 5 TWR 0300 0373 856F 888 0 £0 2000 856F 5 TWR 0300 0373 856F 888 0 £0 2000 856F 5 TWR 0300 0374 8863 886 0 £0 2000 856F 5 TWR 0300 0375 858F 888 0 £0 2000 856F 5 TWR 0300 0375 858F 888 0 £0 2000 856F 5 TWR 0300 0375 858F 888 0 £0 2000 856F 5 TWR 0300 0375 858F 888 0 £0 2000 856F 5 TWR 0300 0375 858F 888 0 £0 2000 856F 5 TWR 0300 0375 858F 888 0 £0 2000 856F 5 TWR 0300 0375 858F 888 0 £0 2000 856F 5 TWR 0300 0375 858F 888 0 £0 2000 856F 5 TWR 0300 0375 858F 888 0 £0 2000 850F WRON TBT 1F 0300 0375 858F 888 0 £0 2000 850F WRON TBT 1F 0300 0376 859F 888 0 £0 2000 850F WRON TBT 1F 0300 0376 859F 888 0 £0 2000 850F WRON TBT 1F 0300 0376 859F 888 0 £0 8500 8505 850 1 CLA WRON 036F WRON TBT 1F 0300 0376 859F 888 0 £0 8500 8505 850 1 CLA WRON 036F WRON TBT 1F 0300 0376 859F 888 0 £0 8500 8505 850 1 CLA WRON 036F WRON TBT 1F 0300 0376 850 858 0 £0 8500 8505 850 1 CLA WRON 036F WRON TBT 1F 036F WRON 0 | | 8936 | 855 0 00 | 0020 | 0020 | TWTW | CON O | 0002 | 00020 | AT #50. |
| 0355 891 888 0 C2 8941 8920 9400 | | 6939 | 888 0 C6 | 8402 | 8940 | 5 | TOL 8 | 0001 | 1F | LOAD THE BUFFER. WRITE. AND SET THE |
| 0356 | | | 888 0 H2 | 0300 | 851F | 1 | TWR | 0300 | | CHECKING SWITCH ON. |
| 0357 8942 888 0 25 8943 832F 7 | | 851F | 888 0 C2 | 8941 | 8942 | | TST | | 7F | THENSEXIT. |
| STA CHER STA | | 8941 | 888 0 42 | 8820 | 8940 | | HBT U | 1 | 18 | |
| 0359 835 | | 8942 | | 8943 | 852F | 7 | LDA W | RON | | |
| O300 B929 BBB 0 0 0B B944 B930 B944 B930 B844 B945 B844 B945 B844 B945 B844 B945 B | | 852F | 888 0 60 | B805 | 853F | | | KWR | | |
| 0361 8944 888 0 25 8814 894F | | | | 0000 | 0000 | | | 0000 | | |
| 0362 894F 888 0 30 8957 895F | | 8929 | 888 0 08 | 8944 | 8930 | AWR | LIRI | | WR4 | |
| 0363 0364 0365 0366 0367 0368 0368 0368 0368 0368 0368 0368 0368 | | | | _ | | | | R2 | | |
| 0364 855F 888 0 82 8945 8929 | | 854F | 888 0 30 | 8937 | 855F | | LDL 8 | 8 | | |
| O365 | | | | | | | | | | |
| 0366 8946 888 0 08 8947 8870 5 LIR1 5F STOP CHECK THE WRITE. USE WSO. 0367 8948 888 0 42 0300 856F 5 TWL 0300 0368 8948 888 0 42 0300 856F 5 TWL 0300 0369 856F 888 0 42 0300 858F F TST 58 0370 857F 888 0 F2 0300 858F PASS2 TRW 0300 0371 8804 888 0 67 0300 858F PASS2 TRW 0300 0372 858F 888 0 62 0400 859F TRD 0400 0373 859F 888 0 66 8000 8000 0374 8803 888 1 00 0000 0000 WROF JMP2 0000 0375 8943 888 0 07 8949 8860 WRON TBT IF 0376 8960F 888 0 42 8820 8943 HBT U1 WRON 0377 8949 888 0 26 8950 8950 1 CLA 0378 8950 888 0 26 8950 8950 1 CLA 0378 8950 888 0 20 8952 8953 8UF TEQ 3F 0378 8950 888 0 20 8952 8953 8UF SEQ TRW 0380 862F 888 0 08 0000 862F IIR1 0000 CKW1 WRITE OK SET SWITCH OFF ANDWEXIT. 0381 8952 888 0 08 8955 863F 2 STA CKW2 0383 863F 888 0 06 8805 8803 CKW1 HLT 0005 WROF 0384 8954 888 0 06 8805 8803 CKW1 HLT 0005 WROF 0385 8951 888 0 06 8805 8803 STA CKWR WROF | | | | | | | | _ | | |
| O367 B947 B98 O C6 B402 B948 5 TBL B0001 SF O368 B948 B88 O H2 O300 B56F 5 TWR O300 TST SB O370 B57F B88 O F2 O200 B88F PASS2 TRW O300 PASS2 O371 B804 B88 O F2 O300 B38F PASS2 TRW O300 PASS2 O373 B59F B88 O F2 O400 B59F TRD O400 PASS2 O373 B59F B88 O F2 O400 B59F TRD O400 B000 O374 B803 B88 O O O000 O400 WROF JMP2 O400 B000 O375 B943 B88 O C7 B949 B60F WRON TBT F SWITCH TESTS EXISTENCE OF PREVIOUS WRITE. O376 B60F B88 O C7 B949 B60F B607 B6 | | | | | | - | | | | |
| 0368 8948 899 0 H2 0300 856F 5 TWR 0300 WRITE ANOTHER SENTINEL BLOCK. 0369 836F 888 0 C2 8948 857F TST 58 0370 857F 888 0 F2 0200 8804 TRW 0300 W6. END. 0371 8804 888 0 F2 0300 858F PASS2 TRW 0300 REWIND TAPES, READMPASS2 AND EXECUTE IT. 0373 859F 888 0 F6 8000 8000 TBU 8000 BOOD 0374 8803 888 1 00 0000 0000 WROF JMP2 0000 WROF JMP2 0000 SWITCH TESTS EXISTENCE OF PREVIOUS WRITE. 0376 860F 888 0 42 8820 8943 HBT U1 WRON NONEIF NONEMEXIT. 0377 8949 888 0 42 8820 8950 1 CLA WRITT 0378 8950 888 0 82 8951 861F TEQ 3F W51. WAIT READY. 0379 861F 888 0 0G 0000 862F IIR1 0000 WHEN TAPE IS FINISHED CHECK FOR ERRORS. 0380 862F 888 0 08 9050 8954 LIR1 0000 CKW1 ERROR STOP THE READER (SECTION S). 0382 8953 888 0 60 8955 863F 2 STA CKW2 HALT. AND THEMMEXIT. 0383 863F 888 0 05 8803 864F 3 LDA WROF 0386 864F 888 0 60 8805 8803 STA CKWR WROF | | | | | | | | | | CHECK THE WRITE. USE WOO. |
| 0369 856F 888 0 C2 8948 857F TST 58 0370 857F 888 0 F2 0200 8804 TRW 0200 PASS2 0371 8804 888 0 F2 0300 858F PASS2 TRW 0300 REWIND TAPES, READMPASS2 AND EXECUTE IT. 0372 858F 888 0 G2 0400 859F TRD 0400 REWIND TAPES, READMPASS2 AND EXECUTE IT. 0373 859F 888 0 F6 8000 8000 TBU 8000 B000 0374 8803 888 1 0 0000 0000 WROF JMP2 0000 S075 8943 888 0 C7 8949 860F WRON TBT 1F SWITCH TESTS EXISTENCE OF PREVIOUS WRITE. 0376 860F 888 0 42 8820 8943 HBT U1 WRON NONEIF NONEMEXIT. 0378 8950 888 0 06 82 8951 861F TEQ 3F SWITCH TESTS EXISTENCE OF PREVIOUS WRITE. 0378 8950 888 0 00 0000 862F S88 0 00 | | | | | | | | - | 5F | |
| 0370 | | | | | | 5 | | | | WRITE ANOTHER SENTINEL BLOCK. |
| 0371 8804 888 0 FZ 0300 858F PASS2 TRW 0300 REWIND TAPES; READMPASS2 AND EXECUTE IT. 0372 858F 888 0 GZ 0400 859F TRD 0400 REWIND TAPES; READMPASS2 AND EXECUTE IT. 0373 859F 888 0 F6 8000 8000 WROF JMP2 0000 BQ00 0374 8803 888 1 00 0000 0000 WROF JMP2 0000 SWITCH TESTS EXISTENCE OF PREVIOUS WRITE. 0375 8943 888 0 C7 8949 860F WRON TBT 1F SWITCH TESTS EXISTENCE OF PREVIOUS WRITE. 0376 860F 888 0 26 8950 8950 1 CLA 0377 8949 888 0 26 8951 861F TEQ 3F WS1.WAIT READY. 0378 8950 888 0 82 8951 861F TEQ 3F WS1.WAIT READY. 0379 861F 888 0 08 0000 862F IIR1 0000 CKW1 WHEN TAPE IS FINISHED CHECK FOR ERRORS. 0380 862F 888 0 08 0000 8954 SAF7 CKW2 FROM THE READER (SECTION S). 0382 8953 888 0 60 8955 863F 2 STA CKW2 HALT. AND THEMSEXIT. 0383 863F 888 0 08 8955 8870 LIR1 CKW2 STOP 0384 8954 888 0 60 8805 8803 CKW1 HLT 0005 WROF 0385 8951 888 0 26 8805 8803 CKW1 HLT 0005 WROF 0386 864F 888 0 26 8805 8803 STA CKWR WROF | | | | | | | | | | |
| 0372 858F 888 0 G2 0400 859F TRD 0400 REWIND TAPES; READMPASS2 AND EXECUTE IT. 0373 859F 888 0 F6 8000 8000 TBU 8000 BQ00 0374 8803 888 1 00 0000 0000 WROF JMP2 0000 SWITE 0375 8943 888 0 C7 8949 860F WRON TBT 1F SWITCH TESTS EXISTENCE OF PREVIOUS WRITE 0376 860F 888 0 42 8820 8943 HBT U1 WRON NONEIF NONEMEXIT. 0377 8949 888 0 26 8950 8950 1 CLA WRIT 0378 8950 888 0 82 8951 861F TEQ 3F WSI.WAIT READY. 0379 861F 888 0 00 0000 862F IIR1 0000 CKW1 ST STINISHED CHECK FOR ERRORS. 0380 862F 888 0 08 9952 8953 BUF 2F NONEIF OK SET SWITCH OFF ANDMEXIT. 0381 8952 888 0 08 0955 863F 2 STA CKW2 HALT 0005 WROF 0382 8953 888 0 60 8955 8670 LIR1 CKW2 STOP 0383 8954 888 0 67 0005 8803 CKW1 HLT 0005 WROF 0386 864F 888 0 60 8805 8803 STA CKWR WROF | | | | | | | | - | PA554 | and a mark to the |
| 0373 | _ | | | | | PASSZ | | | | |
| 0374 8803 888 1 00 0000 0000 WROF JMP2 0000 WSOF PREVIOUS WRITE 0375 8943 888 0 C7 8949 860F WRON TBT 1F SWITCH TESTS EXISTENCE OF PREVIOUS WRITE 0376 860F 888 0 42 8820 8943 HBT U1 WRON NONEIF NONEMEXIT. 0377 8949 888 0 26 8950 950 1 CLA WRITE 0378 8950 888 0 08 28951 861F TEQ 3F WS1.WAIT READY. 0379 861F 888 0 00 0000 862F IIR1 0000 WHEN TAPE IS FINISHED CHECK FOR ERRORS. 0380 862F 888 0 08 9952 8953 BUF 2F NONEIF OK SET SWITCH OFF ANDMEXIT. 0381 8952 888 0 08 0000 8954 LIR1 0000 CKW1 ERR IF ERROR STOP THE READER (SECTION S). 0382 8953 888 0 08 8955 863F 2 STA CKW2 THALT. AND THENMEXIT. 0383 863F 888 0 08 8955 863F 2 LIR1 CKW2 STOP 0384 8954 898 0 67 0005 8803 CKW1 HLT 0005 WROF 0385 8951 888 0 60 8805 8803 STA CKWR WROF | | | | | | | | - | 2224 | REWIND TAPES! READSPASSE AND EXECUTE IT. |
| 0375 8943 888 0 C7 8949 860F WRON TBT 1F 0376 860F 888 0 42 8820 8943 HBT U1 WRON 0377 8949 888 0 26 8950 8950 1 CLA WRIT 0378 8950 888 0 82 8951 861F TEQ 3F WS1.WAIT READY. 0379 861F 888 0 0G 0000 862F IIR1 0000 WHEN TAPE IS FINISHED CHECK FOR ERRORS. 0380 862F 888 0 08 0000 8952 8953 BUF 2F NONEIF OK SET SWITCH OFF ANDMEXIT. 0381 8952 888 0 08 0000 8954 LIR1 0000 CKW1 ERR IF ERROR STOP THE READER (SECTION S). 0382 8953 888 0 08 8955 863F 2 STA CKW2 STOP 0384 8954 888 0 08 8955 8870 LIR1 0005 WROF 0385 8951 888 0 25 8803 864F 3 LDA WROF 0386 864F 888 0 60 8805 8803 STA CKWR WROF | | | | | | | • • • • | | 8000 | WW |
| 0376 860F 888 0 42 8820 8943 | | | | | | | | | | |
| 0377 8949 888 0 26 8950 8950 1 CLA WRIT 0378 8950 888 0 82 8951 861F TEQ 3F WS1.WAIT READY. 0379 861F 888 0 00 0000 862F IIRI 0000 WHEN TAPE IS FINISHED CHECK FOR ERRORS. 0380 862F 888 0 08 0000 8954 LIRI 0000 CKW1 ERR IF ERROR STOP THE READER (SECTION S). 0381 8952 888 0 08 8955 863F 2 STA CKW2 HALT. AND THEN#EXIT. 0383 863F 888 0 08 8955 8870 LIRI CKW2 STOP 0384 8954 888 0 67 0005 8803 CKW1 HLT 0005 WROF 0385 8951 888 0 25 8803 864F 3 LDA WROF 0386 864F 888 0 60 8805 8803 STA CKWR WROF | | | | | | WRON | | - | | |
| 0378 8950 888 0 82 8951 861F TEQ 3F W51.WAIT READY. 0379 861F 888 0 0G 0000 862F IIR1 0000 WHEN TAPE IS FINISHED CHECK FOR ERRORS. 0380 862F 888 0 08 0000 8954 LIR1 0000 CKW1 ERR IF ERROR STOP THE READER (SECTION S). 0381 8952 888 0 08 0000 8954 LIR1 0000 CKW1 HALT. AND THEN#EXIT. 0382 8953 888 0 08 8955 863F 2 STA CKW2 TABLE CKW2 STOP 0384 8954 888 0 67 0005 8803 CKW1 HLT 0005 WROF 0385 8951 888 0 25 8803 864F 3 LDA WROF 0386 864F 888 0 60 8805 8803 STA CKWR WROF | | | | | | | | 1 | WRON | |
| O379 861F 888 O OG OOOO 862F IIR1 OOOO WHEN TAPE IS FINISHED CHECK FOR ERRORS. O380 862F 888 O OB OOOO 8954 BUF 2F NONEIF OK SET SWITCH OFF AND#EXIT. O381 8952 888 O OB OOOO 8954 LIR1 OOOO CKW1 ERR IF ERROR STOP THE READER (SECTION S). O382 8953 888 O OB 8955 863F 2 STA CKW2 HALT. AND THEN#EXIT. O383 863F 888 O OB 8955 8870 LIR1 CKW2 STOP O384 8954 888 O 67 0005 8803 CKW1 HLT OOO5 WROF O385 8951 888 O 25 8803 864F 3 LDA WROF O386 864F 888 O 60 8805 8803 STA CKWR WROF | | | | | | 1 | | _ | | |
| O380 862F 888 0 20 8952 8953 8UF 2F NONEIF OK SET SWITCH OFF AND#EXIT. O381 8952 888 0 08 0000 8954 LIR1 0000 CKW1 ERR IF ERROR STOP THE READER (SECTION S). O382 8953 888 0 08 8955 8870 LIR1 CKW2 STOP O384 8954 888 0 07 0005 8803 CKW1 HLT 0005 WROF O385 8951 888 0 25 8803 864F 3 LDA WROF O386 864F 888 0 60 8805 8803 STA CKWR WROF | | | | | | | | - | | |
| O381 8952 888 0 08 0000 8954 LIR1 0000 CKW1 ERR IF ERROR STOP THE READER (SECTION S). O382 8953 888 0 60 8955 863F 2 STA CKW2 HALT. AND THEN#EXIT. O383 863F 888 0 67 0005 8803 CKW1 HLT 0005 WROF O384 8954 888 0 67 0005 8803 CKW1 HLT 0005 WROF O385 8951 888 0 25 8803 864F 3 LDA WROF O386 864F 888 0 60 8805 8803 STA CKWR WROF | | | | | | | | 0000 | 25 | |
| 0382 8953 888 0 60 8955 863F 2 STA CKW2 HALT. AND THEN#EXIT. 0383 863F 888 0 08 8955 8870 LIR1 CKW2 STOP 0384 8954 888 0 67 0005 8803 CKW1 HLT 0005 WROF 0385 8951 888 0 25 8803 864F 3 LDA WROF 0386 864F 888 0 60 8805 8803 STA CKWR WROF | | | | | | | 40 | 0000 | | |
| 0383 863F 888 0 08 8955 8870 LIR1 CKW2 STOP 0384 8954 888 0 67 0005 8803 CKW1 HLT 0005 WROF 0385 8951 888 0 25 8803 864F 3 LDA WROF 0386 864F 888 0 60 8805 8803 STA CKWR WROF | | | | | | • | | | CMAT | |
| 0384 8954 888 0 67 0005 8803 CKW1 HLT 0005 WROF 0385 8951 888 0 25 8803 864F 3 LDA WROF 0386 864F 888 0 60 8805 8803 STA CKWR WROF | | | | | | 2 | | | e Tab | HALTO AND THENREXITO |
| 0385 8951 888 0 25 8803 864F 3 LDA WROF 0386 864F 888 0 60 8805 8803 STA CKWR WROF | | | | | | CVWI | | | | |
| 0386 864F 888 0 60 8805 8803 STA CKWR WROF | | | | | | | | | #RUP | |
| | | | | | | , | | | WPAE | |
| Eun IVII | | OOAL | 909 V 60 | 5903 | Cues | | | | HINUP | |
| | 9301 | | | | | | ENU I | MTI | | |

Remington Rand Universion of Spert rand corporation Philadelphia, Pa.

IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED. IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WINTTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION, UPON DEMAND

| 0000 | | | | | | | | FLO | | | | 1. | GADAAD ASSEMBLER PASS 1. |
|--------------|------|-----|---|----|-------------|--------------|----------------|------------|-------|---|-------|----|---|
| 0001 | | | | | | | D R ALI | NEWI | 00001 | | 00000 | | |
| 0019 | | | | | | | B8AH Init | EGU | 5999 | | 00000 | | START |
| 0020 | | | | * | | | R0000 | BLR | 4200 | | 4419 | | TAPE INPUT AREA |
| 0021 | | | | | | | | | | | | | |
| | | | | | | | 00000 | BLR | 4000 | | 4199 | | CARD READ AREA |
| 0022 0023 | | | | | | | F0000 | COR | 0200 | | | | FIRST STATION AREA |
| 0023 | | | | | | | C0000 | COR | 0200 | | | | ZND STATION AREA |
| 0025 | | | | | | | B0000 | COR | 0201 | | | | TAPE OUTPUT AREA CARD EDIT TARGET AREA |
| 0026 | | | | | | | E0000 | COR | 0080 | | | | CARD SUFFERS |
| 0027 | | | | | | | U0000 | | | | | | |
| 0027 | | | | | | | V0000 | COR | 0040 | | | | CARO BUFFERS 1ST STATION UNLOAD TABLE |
| 0029 | | | | | | | 10001 | COR | 0020 | | | | 2ND STATION UNLOAD TABLE |
| 0030 | | | | | | | J0001 | COR | | | | | · · · · · · · · · · · · · · · · · · · |
| 0030 | | | | | | | 60000 | COR | 0020 | ~ | | | CURRENT INPUT CARD |
| 0032 | 8622 | 888 | a | 00 | 8661 | 3642 | U0000 | HHH PML | U0039 | С | U0020 | | CARD INPUT BUFFER LINKS |
| 2000 | 8642 | 888 | | | 8681 | 8662 | - | | U0059 | | U0040 | | CARD INFO! BUFFER LINES |
| 0034 | B662 | | 0 | | 8701 | | U0020 | JMP JMP | U0039 | | U0040 | | |
| 0035 | B682 | 888 | | | 8721 | 8682 8702 | U0040 U0060 | JMP | V0019 | | V0000 | | |
| 0036 | 8702 | 688 | | | 8741 | 8722 | V0000 | JMP | V0019 | | V0020 | | |
| 0037 | 8722 | 888 | | | 9641 | 3622 | V0020 | JMP | 00019 | | U0000 | | |
| 0038 | 8742 | 858 | | | 8014 | 8802 | 10001 | LDL | F0013 | | TBIR | | IST STATION UNLOAD CONTROL |
| 0039 | 8743 | 898 | | | 8026 | 3802 | 10001 | LOL | F0025 | | TBIR | | 131 Station orders contine |
| 0040 | 8744 | 898 | - | | 8038 | 9802 | 10003 | LDL | F0037 | | TBIR | | |
| 0041 | 8745 | 858 | - | | 8050 | 8802 | 10004 | LDL | F0049 | | TBIR | | |
| 0042 | B746 | 888 | | | 8062 | 8802 | 10005 | LDL | F0061 | | TB1R | | |
| 0043 | 8747 | 888 | | | 8074 | 5802 | 10005 | LDL | F0073 | | TBIR | | |
| 0044 | 8748 | 888 | | | 8086 | 8802 | 10007 | LDL | F0085 | | TBIR | | |
| 0045 | 8749 | 888 | | | 8098 | 8802 | 10008 | LDL | F0097 | | TBIR | | |
| 0046 | 8750 | 888 | _ | | 8019 | 3802 | 10009 | LDL | F0018 | | TBIR | | |
| 0047 | 8751 | 888 | - | | B031 | 8802 | 10010 | LDL | F0030 | | TBIR | | |
| 0048 | 8752 | 888 | - | | 8043 | 8802 | 10011 | LDL | F0042 | | TBIR | | |
| 0049 | 8753 | 898 | | | 8055 | 8802 | 10012 | LDL | F0054 | | TBIR | | |
| 0050 | 8754 | 888 | | | B067 | 8802 | 10013 | LDL | F0066 | | TBIR | | |
| 0051 | 8755 | 888 | 0 | 30 | 8079 | 8802 | 10014 | LDL | F0078 | | TEIR | | |
| 0052 | 8756 | 888 | 0 | 30 | 8091 | 8802 | 10015 | LDL | F0090 | | TBIR | | |
| 0053 | 8757 | 888 | 0 | 30 | 8112 | 8802 | 10016 | LDL | F0111 | | TBIR | | |
| 0054 | 8762 | 888 | Q | 25 | 8319 | 000C | J0001 | LDA | C0118 | | RX | | 2ND STATION UNLOAD CONTROL |
| 0055 | 8763 | 888 | 0 | 25 | 8331 | 000C | J0002 | LDA | C0130 | | RX | | |
| 0056 | 8764 | 886 | 0 | 25 | 8343 | 000C | J0003 | LDA | C0142 | | RX | | |
| 0057 | 8765 | 888 | 0 | 25 | 8355 | 000C | J0004 | LDA | CO154 | | RX | | |
| 0058 | 8766 | 888 | 0 | 25 | 8367 | 0000 | J0005 | LDA | C0166 | | RX | | |
| 0059 | 8767 | 888 | | | B379 | 0000 | J0006 | LDA | C0178 | | RX | | |
| 0060 | 8768 | 888 | | | 8391 | 000C | J0007 | LDA | C0190 | | RX | | |
| 0061 | 8769 | 855 | | | 8207 | 0000 | J0008 | LDA | C0006 | | RX | | |
| 0062 | 8770 | 888 | Q | 25 | BJ24 | 0000 | J0009 | LDA | C0123 | | RX | | |
| 0063 | 8771 | 888 | 0 | 25 | 8336 | 000C | J0010 | LDA | C1135 | | RX | | |
| 0064 | 8772 | 888 | 0 | 25 | 8448 | 000C | J0011 | LDA | CO147 | | RX | | |
| | | | | | | | | | | | | | |

| semingion mana university | DIVISION OF SPERRY RAND CORPORATION | PHILADELPHIA, PA. |
|---------------------------|-------------------------------------|-------------------|
| • | | |
| • | | |

IN CONSIDERATION OF THE RECEIPT OF REPRODUCE, COPY, USE ON TRANSMIT THIS DOCUME IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION WAITTEN PERMISSION OF SPERRY RAND CORPOSAME TO SPERRY RAND CORPORATION, UP

| 0065 0066 0067 0068 0069 | 8773 8774 8775 8776 8777 | | 0 | | 8360 8372 8384 8396 8212 | 000C 000C 000C | J0012 J0013 J0014 J0015 J0016 | LDA LDA LDA LDA | C0159 C0171 C0183 C0195 C0011 | RX RX RX RX |
|--------------------------------------|--------------------------------------|-----|---|----|--------------------------------------|----------------------|---|--------------------------|---|----------------------|
| VVV | - · · · · | 905 | u | 25 | DETE | OOGC | 70019 | LUA | C0011 | RX |

| 0070 | 8999 | 888 | 0 | 25 | 8803 | ACOR | INIT | LDA | MROF | | I• | INITIALIZE. |
|------|------|-----|---|----|------|------|------|------|-------|-------|-----|---------------------|
| 0071 | | | | | | | | _ | | | 11. | STOP. |
| 0072 | BOOA | 888 | 0 | 67 | 8804 | BOLA | | HLT | PASS2 | | | |
| 0073 | BOLA | 388 | 0 | 60 | 8805 | 802A | | STA | CKWR | | | |
| 0074 | 802A | | | F2 | 0300 | BOJA | | TRW | 0300 | | 12. | SET STARTING VALUES |
| 0075 | BOJA | 888 | | 26 | 8806 | 8806 | | | 0300 | | | SEI SINNITHE TREUES |
| | | | - | | | | | CLA | | | | |
| 0076 | 8806 | 888 | Q | 60 | 8807 | 804A | | STA | NUM | | | |
| 0077 | 804A | 888 | 0 | 60 | 8086 | 805A | | STA | SSCT | | | |
| 0078 | 805A | 888 | ٥ | 25 | 8809 | 8810 | | LDA | | 9F | | |
| 0079 | 8809 | 388 | | 00 | 0050 | 0000 | | CONI | 00005 | 00000 | | |
| 0080 | 8810 | 886 | | 60 | 8811 | | 9 | | | 4444 | | |
| | | | - | | | 806A | 7 | STA | 55# | | | |
| 0081 | 806A | 888 | Q | 25 | 8812 | 9813 | | LDA | | 2F | | |
| 0082 | 8812 | 888 | 0 | 00 | 8420 | 8401 | | JMP | 80019 | 80000 | | |
| C800 | 8613 | 388 | ۵ | 60 | 8814 | 807A | 2 | STA | WR2 | | | |
| 0084 | 807A | 888 | | 25 | 8815 | - , | _ | | *** | oe. | | |
| | | | _ | | | 3816 | | LDA | | 9F | | |
| 0085 | 8815 | 888 | 1 | 00 | 0000 | 0010 | | CON1 | 00000 | 00010 | | |
| 0086 | 8816 | 888 | 0 | 60 | 4201 | BOSA | 9 | STA | R0001 | | | |
| 0087 | ASOB | 888 | 0 | 25 | 8622 | BO9A | | LDA | U0000 | | 13. | THEN GO |
| 0088 | 809A | | _ | | | | | | | | | IIImia AA |
| | | | | 60 | 8817 | BIOA | | STA | KÖ | | | |
| 0089 | BIOA | 888 | Q | 60 | 8818 | 8819 | | STA | K1 | MASTR | | |

| 0090 | 8820 | 898 0 | 60 | B821 | 811A | U1 | STA | UEX | | U. | UNLOAD SECTION |
|---------|------|-------|--------------|----------|------|--------|------|---------|----------------|-------------|------------------------------|
| 0091 | BILA | | | 4001 | 812A | • | HBU | 00001 | | | UNLOAD BUFFER |
| 0092 | 812A | 858 0 | | | | | | 0004 | 9F | OID | ONLUAD BUFFER |
| | | | | 8822 | 8823 | | LDA | 44.00 | - | | |
| 0093 | 9822 | | 00 | 8400 | 8201 | _ | JMP | C0199 | C0000 | | |
| 0094 | 8823 | 888 0 | 80 | 4000 | 9824 | 9 | TDC | D0000 | U2 | | |
| 0095 | 8824 | 888 0 | 30 | 8825 | 3826 | U2 | LDL | | 9F | U2. | CHECK 2ND |
| 0096 | 8825 | | | HHHH | HHHH | | CON | ннннн | ННННН | | |
| 0097 | 8826 | 888 0 | | 8207 | 813A | 9 | LDA | C0006 | £ 12 m 41 -1 1 | | |
| 0098 | 813A | | 82 | 8827 | 3828 | • | TEQ | | U3 | | |
| 0099 | | _ | | | | | | US | 0,5 | . 14 | |
| | 8828 | | | 8829 | 814A | U3 | LDX | 85 | | U.S. | COMPARE 2ND STATION |
| 0100 | 814A | | 08 | 0016 | 8830 | | LIR3 | 0019 | 9F | | |
| 0101 | 8830 | 868 1 | 04 | 8741 | 8741 | 9 | JMP3 | 10000 | | | |
| 0102 | 8802 | 888 1 | 04 | B761 | 8761 | TBIR | JMP3 | J0000 | | | |
| 0103 | 8829 | | 82 | 8831 | 8832 | 8 | TEQ | 4,000 | U6 | | |
| 0104 | 8831 | | OG | 9999 | 815A | • | IIRJ | 9999 | • | | |
| | | | | | | | | 7777 | | | |
| 0105 | 815A | | | 8833 | 8833 | | CLL | | | | |
| 0106 | 8833 | | | B834 | 8830 | | TEQ | U4 | 98 | | |
| 0107 | 8834 | 888 0 | 07 | 0600 | 816A | U4 · | IIR | 0600 | | U4 • | CHECK FOR 600 CARDS |
| 0108 | 816A | 858 0 | 77 | B16A | 817A | | ATL | | | | |
| 0109 | 817A | 888 0 | 07 | 0001 | 818A | | IIR | 0001 | | | |
| 0110 | 818A | 888 0 | | 8808 | 819A | | ADD | SSCT | | | |
| 0111 | 819A | | | | | | | | | | |
| | | | _ | 8808 | 820A | | STA | SSCT | | | |
| 0115 | 920A | | 82 | 8835 | 8836 | | TEQ | | 2F | | |
| 0113 | 8835 | 888 0 | | 8837 | 8837 | | CLA | | | | |
| 0114 | 8837 | 888 0 | 60 | 8808 | 821A | | STA | SSCT | | | |
| 0115 | 821A | 888 0 | 75 | 8811 | 822A | | SUB | SSW | | | |
| 0116 | 822A | | 60 | 8811 | 8838 | | STA | SSW | 3F | | |
| 0117 | 8836 | 888 0 | | 8811 | 8838 | 2 | LDA | 55W | 3F | | |
| 0118 | 8838 | | | | | 2 3 | | 33# | | | |
| | | | | 8839 | 000A | , | ADD | | RA | | |
| 0119 | 8839 | 888 0 | | 0050 | 4999 | | HSS | 0050 | 4999 | | WATCH OUT FOR UNDIGIT GARBLE |
| 0120 | 4999 | 688 0 | 25 | 8207 | 823A | 4999 | LDA | C0006 | | U5. | FILL INTERNAL BUFFER |
| 0121 | 823A | 858 0 | 60 | 8621 | 324A | | STA | E0019 | | | |
| 0122 | 824A | 888 0 | 25 | B212 | 825A | | LDA | C0011 | | | |
| 0123 | 825A | | | 8620 | 826A | | STA | E0018 | | | |
| 0124 | 826A | 888 0 | | 8391 | 827A | | LDA | C0190 | | | |
| 0125 | | | | | | | | | | | |
| | 827A | 888 0 | | 8619 | 828A | | STA | E0017 | | | |
| 0126 | 928A | 888 0 | | 8396 | 829A | | LDA | CQ195 | | | |
| 0127 | 829A | 888 0 | | B618 | BJOA | | STA | E0016 | | | |
| 0128 | BJOA | 388 0 | 25 | 8379 | AICE | | LDA | C0178 | | | |
| 0129 | BJIA | 888 0 | | 8617 | BJ2A | | STA | E0015 | | | |
| 0130 | 832A | 888 0 | | 8384 | 833A | | LDA | C0183 | | | |
| 0131 | BJJA | 888 0 | | 8616 | 834A | | | | | | |
| 0132 | 834A | | | | | | STA | E0014 | | | |
| | | 888 0 | | 8367 | 835A | | LDA | C0199 | | | |
| 0133 | BJ5A | 888 0 | | 8615 | 836A | | STA | E0013 | | | |
| 0134 | 836A | 888 0 | | 8372 | 837A | | LDA | C0171 | | | |
| 0135 | BJ7A | 888 0 | 60 | 8614 | 838A | | STA | E0012 | | | |
| 0136 | BJ8A | 888 0 | | 8355 | 839A | | LDA | C0154 | | | |
| 0137 | BJ9A | | 35 | 8840 | 3841 | | ERS | 9F | 8 F | | |
| 0138 | 9840 | | OH | НННН | HHHH | 9 | CON | OHHHH | HHHHH | | |
| ~ ~ ~ ~ | | 200 | U , 1 | 11111111 | HOME | , | COIT | OHIDINI | Links and | | |

| IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED. IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS. FOR ANY PURPOSE, EXCEPT WITH THE | WRITTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION, UPON DEMAND |
|--|---|

| 0139 | 3841 | 888 | 0 | 60 | 8613 | 840A | 8 | STA | E0011 | |
|------|------|-----|---|----|------|------|------|------|----------|--|
| 0140 | B40A | 888 | | | 8360 | 841A | _ | LDA | C0159 | |
| 0141 | BALA | 886 | 0 | 35 | 8840 | 842A | | ERS | 98 | |
| 0142 | 842A | 888 | | | 8612 | 843A | | STA | E0010 | |
| 0143 | 843A | 888 | 0 | 05 | 8355 | 844A | | LDX | C0154 | |
| 0144 | 844A | 888 | ٥ | 25 | 8343 | 845A | | LDA | C0142 | |
| 0145 | 845A | 888 | _ | 32 | 0900 | 846A | | SHR | 0900 | |
| 0146 | 846A | 898 | | | 0000 | 847A | | LDA | RX | |
| 0147 | 847A | 888 | 0 | 37 | 0100 | 848A | | SHL | 0100 | |
| 0148 | BUBA | 898 | 0 | 60 | 8609 | 849A | | STA | E0007 | |
| 0149 | 849A | 888 | | | 8360 | 850A | | LDX | C0159 | |
| 0150 | BSOA | 888 | | | 8348 | 851A | | LDA | C0147 | |
| 0151 | BSIA | 888 | | 32 | 0900 | 852A | | SHR | 0900 | |
| 0152 | 852A | 888 | | 25 | 0000 | 853A | | LDA | RX | |
| 0153 | 853A | 888 | | 37 | 0100 | 854A | | SHL | <u> </u> | |
| 0154 | 854A | 888 | | 60 | B608 | 855A | | STA | E0006 | |
| 0155 | 855A | 888 | | 05 | 8343 | 856A | | LDX | C0142 | |
| 0156 | 856A | 888 | | 25 | 8331 | 857A | | LDA | C0130 | |
| 0157 | 857A | 888 | | 32 | 0800 | 858A | | SHR | 0800 | |
| 0158 | 858A | 888 | | 25 | 0000 | 859A | | LDA | RX | |
| 0159 | 859A | 888 | | 37 | 0100 | 860A | | SHL | 0100 | |
| 0160 | BOOA | 888 | | 60 | 8607 | 361A | | STA | E0005 | |
| 0161 | 861A | 888 | | 05 | 8348 | 862A | | LDX | CO147 | |
| 0162 | 862A | 888 | | 25 | 8336 | 863A | | LDA | CO135 | |
| 0163 | 863A | 888 | | 32 | 0800 | 864A | | SHR | 0800 | |
| 0164 | 864A | 858 | - | | 0000 | 865A | | LDA | RX | |
| 0165 | B65A | 888 | | 37 | 0100 | 866A | | SHL | 0100 | |
| 0166 | BOOA | 856 | _ | | 8606 | 867A | | STA | E0004 | |
| 0167 | 867A | 888 | | | 8319 | 868A | | LDA | C0118 | |
| 0168 | 868A | 888 | | 35 | 8842 | 8843 | | ERS | 9F | 8 F |
| 0169 | 8842 | 888 | | HH | HHHH | HHHO | 9 | CON | ННННН | HHHH0 |
| 0170 | 8843 | 888 | | 60 | 8605 | 869A | 8 | STA | E0003 | 7 (A 44 (A 4)))))))))) |
| 0171 | 869A | 888 | | | 8324 | 870A | - | LDA | C0153 | |
| 0172 | 870A | 888 | - | | 8842 | 871A | | ER\$ | 98 | |
| 0173 | 871A | 888 | | | 8604 | 872A | | STA | E0002 | |
| 0174 | 872A | 858 | | 06 | 8844 | 8844 | | CLX | | |
| 0175 | 9844 | 898 | | | 8603 | 873A | | STA | E0001 | |
| 0176 | 873A | 888 | | | 8331 | 874A | | LDX | C0130 | |
| 0177 | 874A | 888 | | 25 | 8319 | 875A | | LDA | C0118 | |
| 0178 | 875A | 898 | | | 0700 | 876A | | SHR | 0700 | |
| 0179 | 876A | 858 | 0 | 25 | 000C | 877A | | LDA | RX | |
| 0180 | 877A | 888 | 0 | 37 | 0600 | 878A | | SHL | 0600 | |
| 0181 | 878A | 888 | 0 | 60 | 8611 | 879A | | STA | E0009 | |
| 0162 | 879A | 898 | 0 | 05 | 8336 | BBOA | | LDX | CO135 | |
| 0183 | AOSE | 888 | 0 | 25 | 8324 | 881A | | LDA | C0123 | |
| 0164 | BBIA | 898 | ٥ | | 0700 | 882A | | SHR | 0700 | |
| 0185 | 862A | 886 | | 25 | 000C | 883A | | LDA | RX | |
| 0186 | AEBB | 888 | 0 | | 0600 | 884A | | SHL | 0600 | |
| 0187 | 884A | 888 | | | 8610 | 8845 | | STA | E0008 | BLST |
| 0188 | 8845 | 888 | | | B846 | 8847 | BLST | LDA | | 9F |
| | | - | - | | | | | - | | ** |

| 0189 | 8846 | 888 9 0 | 0 8621 | 8602 | | JMP | £0019 | E0000 | | |
|------|---------------|---------|--------|------|----|-----|-------|-------|-------------------|-----|
| 0190 | 8847 | 888 0 8 | 8 4400 | 885A | 9 | TCD | R0200 | | | |
| 0191 | 885A | 888 0 2 | 5 8818 | 386A | | LDA | K1 | | | |
| 0192 | 8 8 6A | 888 0 7 | 0 8848 | 8849 | | ADD | | 9F | | |
| 0193 | 8848 | 888 0 0 | 0 0000 | 0001 | | CON | 00000 | 00001 | | |
| 0194 | 8849 | 888 0 8 | 0 4401 | 387A | 9 | TOC | R0201 | | | |
| 0195 | 887A | 858 0 2 | 5 8818 | ASSE | | LDA | K1 | | | |
| 0196 | 888A | 888 0 3 | 5 B850 | 9851 | | ERS | | 9F | | |
| 0197 | 8850 | 888 0 0 | 0 0000 | HHHH | | CON | 00000 | QHHHH | | |
| 0198 | 8851 | 898 0 3 | 7 0400 | 889A | 9 | SHL | 0400 | | | |
| 0199 | 889A | 388 0 2 | 0 8852 | OOOA | | BUF | | RA | | |
| 0200 | 8852 | 888 0 2 | 5 0000 | 890A | | LDA | 0000 | | | |
| 0201 | BOOA | 898 0 6 | 0 8818 | 8827 | | STA | K1 | U5 | | |
| 0202 | 3827 | 855 0 2 | 5 8853 | 3854 | U5 | LDA | | 9F | U6. MOVE STATION | 1 |
| 0203 | 8853 | 855 0 0 | 0 8200 | 3001 | | JMP | F0199 | F0000 | | |
| 0204 | 8854 | 888 0 8 | 0 4000 | 3821 | 9 | TDC | 00000 | UEX | | |
| 0205 | 8832 | 856 0 4 | 7 0200 | 891A | U6 | HSS | 0200 | | U7. SELECT STACKE | R 2 |
| 0206 | 891A | 888 0 6 | 7 0001 | 3821 | | HLT | 0001 | UEX | | |
| | | | | | | | | | | |

IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED. IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS. FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION.

| 0208 | 8855 | 888 0 42 | 8820 | 892A | G1 | HBT | U1 | | G. | FETCH NEXT_CARD SECTION |
|------|------|----------|------|------|-----------------|------|---|-----------|-------|---|
| 0209 | 892A | 888 0 26 | 8856 | 8856 | | CLA | | | G1. | RESET TIMER |
| 0210 | 8856 | 858 0 60 | 8857 | 8858 | | STA | T | G2 | | |
| 0211 | 8858 | 888 0 72 | 8859 | 8860 | G2 | HCC | | -63 | G2. | TRY TO FEED A CARD |
| 0212 | 8859 | 898 0 42 | 8820 | 8858 | | HBT | U1 | G2 | | |
| 0213 | 8860 | 888 0 25 | 8817 | 893A | -G3 | LDA | KO | | | |
| 0214 | 893A | 888 0 30 | 8818 | 894A | | LDL | K1 | | G3. | CHECK BUFFERS. |
| 0215 | 894A | 888 0 82 | 8862 | 8863 | | TEQ | | 64 | | |
| 0216 | 8862 | 888 0 42 | 8820 | 8858 | | HBT | U1 | G2 | | |
| 0217 | 8863 | 88 0 888 | 4400 | 895A | G 4 | TCD | R0200 | | | |
| 0218 | 895A | 888 0 35 | 8864 | 8865 | | ERS | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 9F | 64. | MOVE NEXT IMAGE |
| 0219 | 8864 | 888 0 00 | 0000 | НННН | | CON | 00000 | ОНННН | - ' ' | |
| 0220 | 8865 | 888 0 37 | 0400 | B96A | 9 | SHL | 0400 | •••• | | |
| 0221 | 896A | 888 0 20 | 8866 | GOOA | | BUF | • • • • • | RA | | |
| 0222 | 8866 | 88B 0 25 | 0000 | 897A | | LDA | 0000 | WA | | |
| 0223 | 897A | 888 0 60 | 8817 | 898A | | STA | КО | | | |
| 0224 | 898A | 888 0 25 | 8867 | 3868 | | LDA | | 9F | | |
| 0225 | 8867 | 888 0 00 | 1088 | 8782 | | JMP | 60019 | 60000 | | |
| 0226 | 8868 | 888 0 80 | 4400 | 899A | 9 | TOC | R0200 | | | |
| 0227 | 899A | 888 0 42 | 8820 | BOOF | | HBT | U1 | | | |
| 0228 | 800F | 888 0 04 | 0000 | 0000 | | JMP1 | | | | |
| 0229 | 8861 | 888 0 07 | 0150 | BOIF | & G3 | IIR | 0150 | | 65. | STEP TIMER |
| 0230 | 801F | 888 0 77 | BOIF | 802F | | ATL | | | | • |
| 0231 | 802F | 888 0 07 | 0001 | 803F | | IIR | 0001 | | | |
| 0232 | 803F | 888 0 70 | 8857 | BO4F | | ADD | T | | | |
| 0233 | 804F | 888 0 60 | 8857 | 305F | | STA | Ť | | | |
| 0234 | 805F | 888 0 05 | 0000 | 806F | | LDX | 0000 | | | SYNCHRONIZE LOOP WITH DRUM |
| 0235 | 806F | 888 0 82 | 8869 | 8860 | | TEO | | -63 | | |
| 0236 | 8869 | 888 0 67 | 0002 | 8855 | | HLT | 0002 | GI | | |

!

| 0245 8872 888 0 42 8820 8870 1 HBT U1 STOP | 0237 0238 0239 0240 0241 0242 0243 0244 | 8870 807F 808F 8871 809F 810F 811F 8873 | 888 0 7 888 0 2 888 0 4 888 0 4 888 0 7 888 0 7 | 7 807F 6 8871 8 0000 2 8872 5 0000 0 8873 0 0001 | 807F 908F 8871 809F 810F 811F 8671 9000 8870 | 3 TOP 2 | IIR ATL CLA TEG1 HBT LDX ADD CON HBT | 0150 2F 0000 1F 0000 00000 U1 | 28 10000 STOP | 5. 51. | STOP ROUTINE SHUT DOWN READER SYNCHRONIZE LOOP WITH DRU |
|--|--|--|--|--|--|------------|--|---|---------------------|-----------|---|
|--|--|--|--|--|--|------------|--|---|---------------------|-----------|---|

| 0246 | 8819 | 888 | 0 | 08 | 6874 | 8855 | MASTR | LIR1 | MAST1 | G1 | M. | MASTER PROCESS CONTROL |
|------|------|-----|---|----|-------------|------|-------|------|-------|-------|-----|------------------------|
| 0247 | 9874 | 888 | 0 | 25 | B790 | 312F | MAST1 | LDA | G0008 | | Mi. | FETCH A CARD |
| 0248 | 312F | 888 | 0 | 30 | 8875 | 8876 | | LDL | | 2F | | |
| 0249 | 3875 | 99B | 0 | 11 | 2000 | 0000 | | ZON | FIN O | 00000 | | |
| 0250 | 8876 | | | 82 | 8877 | 8878 | 2 | TEO | | 3F | M2. | CHECK FOR FIN |
| 0251 | 8877 | 888 | | 25 | 8791 | 813F | _ | LDA | 60009 | • | | |
| 0252 | 813F | 888 | | 30 | 8879 | 3880 | | LDL | 90001 | 25 | | |
| 0253 | 8879 | 888 | - | 69 | 5800 | 0000 | | NUM | FIN O | 00000 | | |
| 0254 | 8880 | 888 | Ö | 82 | 8881 | 8882 | 2 | TEQ | FIN O | 4F | | |
| 0255 | 8881 | 388 | Õ | 25 | 8883 | 6884 | • | LDA | | 2F | | |
| 0256 | | | - | | | | | | | | | |
| | 8883 | 888 | | 99 | 9999 | 9999 | _ | CON | 99999 | 99999 | | |
| 0257 | 8864 | 888 | 0 | 60 | 8807 | 3885 | 2 | STA | NUM | WRITE | | |
| 0258 | 8878 | 988 | 0 | 30 | 8886 | 3887 | 3 | LDL | | 2F | M3. | CHECK FOR CPY |
| 0259 | 8886 | 888 | 0 | 12 | 3000 | 0000 | | ZON | CPY O | 00000 | | |
| 0260 | 8887 | 888 | ũ | 82 | 8888 | 8882 | 2 | TEO | | 4F | | |
| 0261 | 8888 | 888 | o | | 8791 | 814F | | LDA | 60009 | ••• | | |
| 0262 | 814F | 888 | | 30 | 8889 | 8890 | | LDL | 90003 | 2F | | |
| 0263 | 8889 | 888 | - | 37 | 8800 | 0000 | | NUM | CPY 0 | 00000 | | |
| 0264 | | | | | | | • | | | | | |
| | 8890 | 898 | _ | | 8891 | 8882 | 2 | TEQ | COPY | 4F | | |
| 0265 | 8882 | 888 | U | 08 | 8819 | 8885 | 4 | LIRI | MASTR | WRITE | M4. | WRITE LINE |

| IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT. THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED. IN WHOLE OR IN PART, OR TO SUPERS SUCH ACTION BY OTHERS. FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION, UPON DEMAND | |
|--|--|

| | 0269 | 8891 | 688 0 | | 8892 | 8870 | COPY | LIRI | 5F | STOP | C. | COPY OLD TAPE | |
|---|------|-------------|-------|----|------|---------------|-------|------|------------|-------|-------------|--------------------|--|
| | 0270 | 8892 | 888 1 | | 8893 | 8805 | 5 | LIR2 | | CK#R | C1. | STOP THE READER | |
| | 0271 | 8893 | 888 0 | | 8787 | 615F | 6 | LDA | G0005 | | | | |
| | 0272 | 815F | 88B 0 | - | 8789 | 816F | | LDX | G0007 | | CZ. | CHECK PREV WRITE | |
| | 0273 | B16F | 888 0 | _ | 0500 | 817F | | SHR | 0500 | | | _ | |
| | 0274 | 817F | 888 0 | _ | 8894 | 818F | | STA | FRST | | C3 . | SET UP FIRST LAST | |
| | 0275 | 816F | 888 0 | | 8895 | 8896 | | STX | LST | -CP | | | |
| | 0276 | 8896 | 88B 0 | | 4201 | 319F | -CP | LOL | R0001 | | C4. | FIRSTICURRENT | |
| | 0277 | 919F | 888 0 | | 8894 | 320F | | LDA | FRST | | | | |
| | 0278 | 820F | 888 0 | | 8898 | 8899 | | ERS | | 2F | | | |
| | 0279 | 8988 | 858 0 | 00 | 0000 | HHHO | | CON | 00000 | OHHHO | | • | |
| | 0280 | 8899 | 888 0 | 82 | 8900 | 8901 | 2 | TEQ | 3F | 8F | | | |
| | 0281 | 8901 | 898 0 | 87 | 8902 | 8903 | 8 | TGR | 9 F | 4F | | | |
| | 0282 | 8902 | 888 0 | G2 | 0200 | 821F | 9 | TRD | 0200 | | C5. | READ TAPE FORWARD | |
| | 0283 | 821F | 888 0 | C7 | 8902 | 822F | | TBT | 98 | | | | |
| | 0284 | 822F | 888 0 | | 8904 | 822F | | TOT | | * | | | |
| | 0285 | B904 | 88B 0 | | 8905 | 8905 | | CLA | | | | | |
| | 0286 | 8905 | 888 0 | | 8906 | 8897 | | TEQ | | acp | | | |
| | 0287 | 8906 | 898 0 | | 4200 | 8896 | | TBU | R0000 | -CP | | | |
| | 0288 | 8897 | 888 0 | | 0006 | 8903 | &CP | HLT | 0006 | 4F | | | |
| - | 0289 | 8903 | 388 0 | | 0205 | 823F | 4 | TRD | 0205 | | Co. | READ TAPE BACKWARD | |
| | 0290 | 823F | 888 0 | C7 | 8907 | 823F | | TBT | | * | | | |
| | 0291 | 8907 | 898 0 | 26 | B908 | 8908 | | CLA | | | | | |
| | 0292 | 8908 | 888 0 | 82 | 8909 | 8911 | | TEQ | | aCPP | | | |
| | 0293 | 8909 | 888 0 | F6 | 4200 | 8910 | | TBU | R0000 | -CPP | | | |
| | 0294 | 8910 | 888 0 | 25 | 8894 | 824F | -CPP | LDA | FRST | | C7. | RECOMPARE | |
| | 0295 | 824F | 888 0 | 35 | 8912 | 8913 | | ERS | | 2F | | | |
| | 0296 | 8912 | 888 0 | 00 | 0000 | HHHO | | CON | 00000 | OHHHO | | | |
| | 0297 | 8913 | 888 0 | | 4343 | 82 5 F | 2 | LDL | R0143 | | | | |
| | 0299 | 825F | | 82 | 8902 | 8901 | | TEO | 98 | 88 | | | |
| | 0300 | 8911 | | 67 | 0006 | 8902 | &CPP | HLT | 0006 | 98 | | | |
| | 0301 | 8900 | 888 0 | | 8894 | 826F | 3 | LDA | FRST | | C8. | MOVE TO OUTPUT. | |
| | 0302 | 826F | | 35 | 8914 | 9915 | | ERS. | | 2F | | | |
| | 0303 | 8914 | 888 0 | | 0000 | 000H | | CON | 00000 | 0000H | | | |
| | 0304 | 8915 | | 37 | 0500 | 827F | 2 | SHL | 0500 | | | | |
| | 0305 | 827F | 38B 0 | | 000A | 828F | | ADD | RA | | | | |
| | 0306 | 828F | | 70 | B916 | 8917 | | ADD | MOV | 1F | | | |
| | 0307 | 3916 | 888 0 | | 4200 | 8918 | MOV | TDC | R0000 | WRIT2 | | | |
| | 0308 | 8917 | 888 0 | | 8919 | 829F | 1 | STA | WRITL | | | | |
| | 9000 | 829F | 856 0 | | B920 | 8919 | | LDA | | WRITI | | | |
| | 0310 | 8920 | _ | 00 | 8801 | 8782 | | JMP | G0019 | G0000 | | | |
| | 0311 | 9918 | | 08 | 8921 | 8885 | WRIT2 | LIRI | 5 F | WRITE | C9. | THEN WRITE IT OUT | |
| | 0313 | 8921 | | 25 | 8894 | 830F | 5 | LDA | FRST | | | | |
| | 0314 | 930F | | 30 | 8895 | 831F | | LDL | LST | | | | |
| | 0315 | 831F | | 70 | 8922 | 332F | | ADD | ONE | | | | |
| | 0317 | 832F | | 87 | 8819 | 333F | | TGR | MASTR | | | • | |
| | 0318 | 833F | | 60 | 8894 | 8923 | | STA | FRST | 5F | C10. | CHECK INPUT BUFFER | |
| | 0319 | 8923 | | 25 | 8919 | 834F | 5 | LDA | WRITI | | | | |
| | 0320 | 834F | 888 0 | 70 | 8924 | 835F | | ADD | M20 | | | | |
| | | | | | | | | | | | | | |

| 0321 | BJSF | 388 | 0 | 30 | 8925 | 8926 | | LDL | | 2F |
|------|------|-----|---|----|------|------|-----|-----|-------|-------|
| 0322 | 8925 | 888 | Q | 80 | 4400 | 8918 | | TDC | R0200 | WRIT2 |
| 0323 | 8926 | 898 | 0 | 82 | 8902 | 8917 | 2 | TEQ | 98 | 18 |
| 0324 | 8924 | 888 | 0 | 00 | 0020 | 0000 | M20 | CON | 00002 | 00000 |
| 0325 | 8922 | 888 | 0 | 00 | 0000 | 0001 | ONE | CON | 00000 | 00001 |

| 0326 | 8885 | 888 0 42 | B820 | 836F | WRITE | HBT | UI | | W. TAPE WRITE CONTROL SECTION. |
|------|------|----------|------|------|-------------|------|------------|--------------|--|
| 0327 | 836F | 888 0 25 | 8807 | 837F | | LDA | NUM | | WI. SET LINE COUNT. |
| 0328 | 837F | 888 0 60 | 8783 | 938F | | STA | 60001 | | |
| 0329 | 838F | 888 0 31 | 8927 | 8927 | | CLL | | | |
| 0330 | 8927 | 388 0 50 | 8762 | 839F | | STL | 60000 | | |
| 0331 | 839F | 388 Q 70 | 8922 | 8928 | | ADD | ONE | -WR | W2. PLACE IN BUFFER |
| 0332 | 8928 | 898 0 60 | 8807 | 8930 | -WR | STA | NUM | WR4 | |
| 0333 | 8930 | 888 0 25 | 8931 | 8932 | 带尺 4 | LDA | | 1F | |
| 0334 | 8931 | 898 0 00 | 8801 | 8782 | _ | JMP | 60019 | 60000 | |
| 0335 | 8932 | 888 0 88 | 4000 | 840F | 1 | TCD | D0000 | | |
| 0336 | 840F | 888 0 25 | 8814 | 341F | | LDA | WR2 | | |
| 0337 | 841F | 888 0 30 | 8933 | 8934 | _ | LOL | 9F | 1F | |
| 0338 | 8933 | 688 0 00 | 8600 | 9581 | 9 | JMP | 80199 | 80180 | |
| 0339 | 8934 | 888 0 80 | 4000 | 842F | 1 | TDC | D0000 | | |
| 0340 | 842F | 888 0 82 | 8935 | 843F | | TEO | 1F | | |
| 0341 | 843F | 888 0 70 | 8936 | 844F | | ADD | TWTW | | |
| 0342 | 844F | 888 0 60 | 8814 | 845F | | STA | WR2 | | |
| 0343 | 845F | 898 0 42 | 8820 | 846F | | HBT | U1 | | |
| 0344 | 846F | 888 0 04 | 0000 | 0000 | | JMP1 | 0000 | | |
| 0345 | B935 | 888 0 25 | 8937 | 8528 | 1 | LDA | 85 | 1F | |
| 0346 | 8937 | 888 0 00 | 8420 | 8401 | 8 | JMP | B0019 | B0000 | |
| 0347 | 8938 | 85B 0 60 | 8814 | 847F | 1 . | STA | WR2 | | |
| 0348 | 847F | 888 0 42 | 8820 | 348F | | HBT | U1 | | |
| 0349 | 848F | 88B 0 25 | 8401 | 349F | | LDA | B0000 | | |
| 0350 | 849F | 888 0 60 | 8601 | 850F | | STA | 80200 | | |
| 0351 | 850F | 888 1 02 | 8939 | 9805 | | LIR2 | | CKWR | W3. CHECK PREV WRITE |
| 0352 | 8936 | 998 0 00 | 0020 | 0020 | TWTW | CON | 00002 | 00020 | |
| 0353 | 8939 | 888 Q C6 | 8402 | 8940 | 5 | TBL | 80001 | 1F | |
| 0354 | 8940 | 888 0 H2 | 0300 | 851F | 1 | TWR | 0300 | • | |
| 0355 | 891F | 888 0 C2 | 8941 | 8942 | | TST | | 7 F | |
| 0356 | 8941 | 888 0 42 | 8820 | 8940 | | HBT | U1 | 18 | |
| 0357 | 8942 | 89B 0 25 | 8943 | 852F | 7 | LDA | WRON | | |
| 0358 | 852F | 888 0 60 | 8805 | 853F | | STA | CKWR | | |
| 0359 | 853F | 898 0 04 | 0000 | 0000 | | JMP1 | 0000 | | |
| 0360 | 8929 | 888 0 08 | 8944 | 8930 | & WR | LIR1 | | WR4 | W4. WRITE SENTINEL. |
| 0361 | 8944 | 898 0 25 | 8814 | 854F | | LDA | WR2 | •••• | |
| 0362 | 354F | 888 0 30 | 8937 | 855F | | LDL | 88 | | |
| 0364 | 855F | 888 0 82 | 8945 | 8929 | | TEQ | | AWR | |
| 0365 | 8945 | 888 1 02 | B946 | 8805 | | LIR2 | 5F | CKWR | WS. CLEAN UP. |
| 0366 | 8946 | 888 0 08 | 8947 | 8570 | 5 | LIRI | | STOP | |
| 0367 | 8947 | 898 0 C6 | 8402 | 8948 | 5 | TBL | 80001 | 5F | |
| 0368 | 8948 | 898 0 H2 | 0300 | 356F | 5 | TWR | 0300 | | |
| 0369 | 856F | 888 0 C2 | 8948 | 857F | | TST | 58 | | |
| 0370 | 857F | 888 0 F2 | 0200 | 8804 | | TRW | 0200 | PASS2 | |
| 0371 | 8804 | 888 0 F2 | 0300 | 358F | PASS2 | TRW | 0300 | , nema | Wa. END. |
| 0372 | 858F | 888 0 G2 | 0400 | 859F | | TRO | 0400 | | |
| 0373 | 859F | 388 0 F6 | 8000 | 8000 | | TBU | 8000 | 8000 | |
| 0374 | 8803 | 888 1 00 | 0000 | 0000 | WROF | JMP2 | 0000 | ₩ ♥*₩ | W50. PREVIOUS WRITE |
| 0375 | 8943 | 888 0 C7 | 9949 | 860F | WRON | TET | 1F | | news 1 1980 1 \$ A A A A A A A A A A A A A A A A A A |
| | | | | | ******** | | - : | | |

.

| 0376 | 860F | 898 | 0 | 42 | 8820 | 8943 | | HBT | U1 | WRON | |
|--------|------|-----|---|----|------|------|------|------|------|------|-----------------|
| 0377 | 8949 | 898 | 0 | 26 | 8950 | 8950 | 1 | CLA | | | |
| 0378 | 8950 | 888 | 0 | 82 | 8951 | 861F | | TEQ | 3F | | W51.WAIT READY. |
| 0379 | 861F | | | | 0000 | 362F | | IIRI | 0000 | | |
| 9380 | 862F | 888 | 0 | 20 | 8952 | 8953 | | BUF | _ | 2F | |
| 0361 | 8952 | 888 | 0 | QB | 0000 | 8954 | | LIR1 | 0000 | CK#1 | |
| 0382 | 8953 | 888 | 0 | 60 | 8955 | 863F | 2 | STA | CK#2 | | |
| 0383 | 863F | 888 | 0 | 08 | 8955 | 8870 | | LIR1 | CKW2 | STOP | |
| 0384 | 8954 | 888 | 0 | 67 | 0005 | 8803 | CKMI | HLT | 0005 | WROF | |
| 0385 | 8951 | 858 | 0 | 25 | 8803 | 864F | 3 | LDA | WROF | | |
| 0386 | 864F | 888 | 0 | 60 | 8805 | 8803 | | STA | CKWR | WROF | |
| - 0387 | | | | | | | | END | INIT | | |
| | | | | | | | | | | | |

IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THERIN CONTAINED. IN WHOLE OR IN BART, OR TO SUFFER SUCH ACTION BY OTHERS. FOR ANY PURPOSE, EXCEPT WITH THE WAITTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION, UPON DEMAND.

IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE. COPY, USE OF TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED. IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE. EXCEPT WITH THE WHITTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER OWN TO SUBSED AND CORPORATION.

1. GADAAD ASSEMBLER PASS 1. TABLE OF CONTENTS C. COPY ROUTINE G. GET NEXT CARD IMAGE ROUTINE I. INITIALIZE ROUTINE M. MASTER CONTROL ROUTINE U. CARD BUFFER UNLOAD CO-ROUTINE W. TAPE WRITE ROUTINE THIS PASS READS CARDS ONTO TAPE. UPDATING A PREVIOUS TAPE. THE SHOW BEGINS AT ROUTINE I. ERROR STOPS M MEANING 1 CARD READ COMPARISON ERROR 2 HSR OFF NORMAL 5 TAPE WRITE ERROR 6 TAPE READ ERROR

I. INITIALIZE.

II. STOP.
HALT. IF M RESTART GO TO PAS2 (W6).

IZ. SET STARTING VALUES
SET LINE COUNT TO O
SET STACKER SELECT COUNT TO O
SET STACKER SELECT TO POCKET O
RESET OUTPUT BUFFER
SET CURRENT TAPE INPUT LINE COUNT TO -10
CLEAR CARO INPUT BUFFERS

IJ. THEN GO

TO MASTER CONTROL MI.

(---IN---) 0091 U1. UNLOAD BUFFER 0095 UZ. CHECK 2ND .) EMPT....)O FULL : 0099 U3. COMPARE 2ND STATION) ERR: .. OK! 0107 ***** U4. CHECK FOR 600 CARDS I U5. FILL INTERNAL BUFFER! 0202 U6. MOVE STATION 1 0205 U7. SELECT STACKER 2

- U. UNLOAD SECTION UI. UNLOAD BUFFER FILL 2ND STATION AREA U2. CHECK 2ND
- STATION EMPTY. IF EMPTY. GO TO US.
- U3. COMPARE 2ND STATION WITH PREVIOUS 1ST STATION FOR CHECK. GO TO US IF COMPARISON FAILS.
- U4. CHECK FOR 600 CARDS IF SO SWAP CARD POCKETS O AND 1
- US. FILL INTERNAL BUFFER EDIT 2ND STATION TO E REGION SEE GADAAD PASS 2. SECTION E FOR OUTPUT FORMAT MOVE REGION E TO NEXT FREE CARD INPUT BUFFER THEN CYCLE EMPTY BUFFER CONTROL LINK KI.
- U6. MOVE STATION 1 TO 1ST STATION AREA. THEN EXIT.
- U7. SELECT STACKER 2 BEGINNING WITH BAD COMPARISON CARD. HALT. THEN EXIT.

- G. FETCH NEXT CARD SECTION
- GI. RESET TIMER FOR OFF NORMAL
- G2. TRY TO FEED A CARD
 IF OFF NORMAL GO TO G5.
- G3. CHECK BUFFERS.

 IF BUFFERS ARE EMPTY GO TO G2

 AND FEED ANOTHER CARD.
- G4. MOVE NEXT IMAGE
 TO AREA G.
 THEN CYCLE FULL SUFFER CONTROL LINK KO.
 AFTER THAT EXIT.
- G5. STEP TIMER
 STEP THE OFF NORMAL TIMER.
 IF TOO LONG STOP.
 THEN TRY AGAIN BY GOING TO GI.
 OTHERWISE GO TO G3 AND EMPTY A BUFFER.

S. STOP ROUTINE
S1. SHUT DOWN READER
COUNT TO 150 TO MAKE SURE ALL COMMITTED
CARDS HAVE BEEN READ.
THEN EXIT.

IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED. IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION, WON DEMAND.

- M. MASTER PROCESS CONTROL
- MI. FETCH A CARD BY GOING TO SECTION G.
- M2. CHECK FOR FIN

 IF SO SET LINE NUMBER TO SENTINEL

 AND WRITE TAPE AT W1.
- M3. CHECK FOR CPY
 IF SO JUMP TO COPY ROUTINE C1.
- M4. WRITE LINE
 THIS IS A CARD TO BE PROCESSED BY PASS 2 SO
 WE WRITE IT OUT. USING ROUTINE W. AND GO
 BACK TO M1.

- C. COPY OLD TAPE C1. STOP THE READER ROUTINE S. C2. CHECK PREV WRITE AT W50. C3. SET UP FIRST LAST LINE NUMBERS FOR OLD TAPE. C4. FIRST: CURRENT IF FIRST IS LESS THAN CURRENT GO TO CO. IF FIRST EQUALS CURRENT GO TO C8. C5. READ TAPE FORWARD THEN GO BACK TO C4. IF ERROR ON TAPE READ! HOWEVER! HALT AND REVERSE DIRECTION C6. READ TAPE BACKWARD IF ERROR REVERSE DIRECTION AT CS. C7. RECOMPARE IF FIRST IS STILL LESS THAN CURRENT. GO TO CO IF THEY ARE EQUAL. REREAD FORWARD AT C5. IF GREATER. WE ALSO GO TO C5 (PROBABLY A BAD MACHINE ERROR) CB. MOVE TO OUTPUT. MOVE A RECORD FROM THE OLD TAPE TO WORKING STORAGE (REGION G). C9. THEN WRITE IT OUT THE OLD TAPE IS NOW POSITIONED TO WRITE PROPERLY. USE SECTION W TO WRITE OUT A LINE. INCREMENT 'FRST' AND CHECK FOR END. IF DONE WITH THIS COPY CARD GO BACK TO MASTER
 - CONTROL MI
 CONTROL MI
 CIO-CHECK INPUT BUFFER
 IF EXHAUSTED READ ANOTHER RECORD AT C5.

OTHERWISE GO BACK TO CB.

| (IN) | |
|-----------------------|--|
| 0327 | |
| (WI. SET LINE COUNT. | *) FIN*****) |
| OK: : | • |
| 0331 : (| *) |
| FULL 8 | |
| 0351 | • |
| W3. CHECK PREV WRITE | ************************************** |
| 0360 1 | ••••••••••• |
| (W4. WRITE SENTINEL. | *) NO: ****) 0 |
| YES: : | |
| W5. CLEAN UP. | to e B |
| 0371 | |
| #6. END. | |
| 0374 | |
| |) NONE |
| WRIT : : 0378 : | |
| (W51.WAIT READY. |) |

- W. TAPE WRITE CONTROL SECTION. WI. SET LINE COUNT. AND INCREMENT IF SENTINEL JUMP TO W4. W2. PLACE IN BUFFER THEN CHECK FOR BUFFER FULL.
- IF NOT. EXIT. W3. CHECK PREV WRITE AT #50. LOAD THE BUFFER. WRITE, AND SET THE CHECKING SWITCH ON. THEN EXIT.
- W4. WRITE SENTINEL. CHECK FOR END OF TAPE RECORD. IF NOT RETURN TO WHOWRITING SENTINELS UNTIL A TAPE RECORD IS DUMPED OUT.
- W5. CLEAN UP. CHECK THE WRITE. USE WSO. WRITE ANOTHER SENTINEL BLOCK.
- W6. END. REWIND TAPES, READ PASSE AND EXECUTE IT.
- W50. PREVIOUS WRITE ... SWITCH TESTS EXISTENCE OF PREVIOUS WRITE. IF NONE EXIT.
- W51.WAIT READY. WHEN TAPE IS FINISHED CHECK FOR ERRORS. IF OK SET SWITCH OFF AND EXIT. IF ERROR STOP THE READER (SECTION S). HALT. AND THEN EXIT.

Remington. Rand. Univ Division of Sperfy rand corporation PHILADELPHIA, PA.

IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED. IN WHOLE OR IN ARAT, OR TO SUFFER SUCH ACTION BY OTHERS. FOR ANY PURPOSE, EXCEPT WITH THE WAITTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION, UPON DEMAND

| TO HE ER |
|--|
| REES NOT A CONTAIN PT WITH ' |
| PIPIENT AGON THEREIT |
| THE REC |
| OCUMENT, |
| MENT AND ON BY OTH STAND BY OTH STAND BY OTH STAND STA |
| RECEIPT OTHIS DOCU |
| NOF THE RANSMIT SUFFER SPERRY R. CORPOR |
| IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT ANNOW THE INFORMATION THEREIN CONTAINED. IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS. FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION, UPON DEMAND. |
| IN CONUCE. COPY |
| REPROD IN WHO! WRITTE |

| 0000 | | FLO | | | GADAAD ASSEMBLER PASS 2+ |
|------|---------|----------------------|-------|--------|--|
| 0001 | | | | TAB | LE OF CONTENTS |
| 0002 | | | | X | A. AJST* SUBROUTINE. |
| 0003 | | | | X | B. BEGINNING OF ASSEMBLY |
| 0004 | | | | X | C. CONTROL OPS. |
| 0005 | | | | X | D. DEFINE ADDRESS (DEFN*) |
| 0006 | | | | X | E. EDIT INPUT CARD |
| 0007 | | | | X | F. FIND AND RESERVE BEST LOCATION (FARB#) |
| 0008 | | | | X | L. PROCESS A ADDRESS. |
| 0009 | | | | X | O. OUTPUT SUBROUTINE. |
| 0010 | | | | X | P. PROCESSING OF INSTRUCTIONS. |
| 0011 | | | | X | Q. MASTER ADDRESS CALCULATOR (FIND#) |
| 0012 | | | | X | S. SYMBOL TABLE SEARCH (SRCH# |
| 0013 | | | | Ŷ | X. EXAMINE REMARKS FIELD |
| 0014 | | | | Ŷ | Z. ENDING OF ASSEMBLY. |
| 0015 | | | | Ŷ | THIS PASS DOES THE ACTUAL ASSEMBLY. |
| 0016 | | | | â | THE SHOW BEGINS AT ROUTINE B. |
| 0017 | | BLR 0000 | 0399 | ^ | THE SHOW BERRIAS WI MODITIVE DE |
| 0018 | BSAH | NEW1 00001 | 00000 | a | CAUSES ASSEMBLY INTO BODA - 899F AREA. |
| 0019 | 50000 | COR 0201 | 00000 | G | The state of the s |
| 0020 | 60000 | COR 0201 | | G | INPUT BUFFER |
| 0021 | _ | | 2000 | G | INPUT BUFFER |
| 0022 | 70000 | BLR 4800 | 4999 | G | OUTPUT BUFFER |
| | 50000 | COR 0014 | | G | BLA-BLR CONTROL |
| 0023 | C0000 | BLR 4030 | 4035 | G | C ADDRESS CONTROL |
| 0024 | D0000 | COR 0202 | | G | DRUM AVAILABILITY TABLE |
| 0025 | E0000 | COR 0006 | | G | DEFN* CONTROL |
| 0026 | F0000 | COR 0024 | | 6 | FAR8* CONTROL |
| 0027 | 10000 | COR 0010 | | G | FORWARD LOCAL TABLE |
| 0028 | J0000 | COR 0010 | | 6 | BACKWARD LOCAL TABLE |
| 0029 | L0000 | BLR 4010 | 4015 | G | A ADDRESS CONTROL |
| 0030 | M0000 | BLR 4020 | 4025 | G | M ADDRESS CONTROL |
| 0031 | 90000 | BLR 4000 | 4009 | G | INDEX REGISTER CODES |
| 0032 | R0000 | COR 0011 | | Ğ | REMARKS |
| 0033 | U0000 | COR 0004 | | Ğ | H FIELDS |
| 0034 | V0000 | COR 0004 | | Ğ | H FIELD CONTROL |
| 0035 | W0000 | EQU 5200 | | • | TO TAKE CONTINUE |
| 0036 | X0000 | COR 0006 | | G | EQU CONTROL |
| 0037 | Y0000 | EQU 7800 | | G | BAND FOR LOADING ROUTINE |
| 0038 | Z0000 | BLR 0989 | 0999 | G | BLANK COMMENTS |
| 0039 | 10000 | COR 0005 | W/// | _ | PAIR ADDRESS CONTROL |
| 0040 | 30000 | COR 0007 | | G | EDITING |
| 0041 | STAB | BLR 1000 | 1999 | G | |
| 0042 | ETAB | | 2999 | G | SYMBOL TABLE EQUIVALENTS TABLE |
| 0043 | • | | 2777 | 6 | |
| 0044 | A AH | COR 0001 COR 0001 | | G G | A FIELD ZZZZNNNNN AH FIELD OOZZZOONNN |
| 0045 | M M | COR 0001 | | • | AH FIELD OOZZZOONNN |
| 0046 | | | | | |
| 0047 | MH | COR 0001 | | | |
| | C. | COR 0001 | | | |
| 0048 | CH | COR 0001 | | | |
| | | | | | \cdot |

| IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT. THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED. IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION, UPON DEMAND |
|--|
|--|

| 0049 | ITAP1 | EOU | 0300 | | G | INPUT TAPE |
|------|------------|-----|---------------|------|----|--|
| 0050 | OTAP1 | EQU | 0500 | | G | OUTPUT TAPE |
| 0051 | OTAP2 | EGU | 0600 | | G | CONTROL FOR FLOW PASS PSEUDOCODE |
| 0052 | OTAP3 | EGU | 0700 | | G | COMMENTS FOR FLOW PASS |
| 0053 | COMTS | SLR | 3400 | 3599 | (3 | CUMMENTS FOR PLUE PASS |
| 0054 | | | | 2277 | | |
| 0055 | CMTSI | EOU | 3401 | | | |
| 0056 | STOPT | EQU | #9801 | | _ | |
| | EXIT | EOU | BOFB | | G | VARIOUS TEMP STORAGES |
| 0057 | EXITI | EQU | 81F8 | | | |
| 0058 | EXIT2 | EOU | 82F8 | | | |
| 0059 | TEMP | EOU | 8 3 F8 | | | |
| 0060 | TEMP1 | EQU | 84F8 | | | |
| 0061 | TEMP2 | EOU | 85F8 | | | |
| 0062 | ERROR | EQU | 86 F 8 | | G | ERRORS ON CURRENT LINE |
| 0063 | DEFX | EQU | 87FB | | | |
| 0064 | UDEFX | EQU | 88FB | | | |
| 0065 | SYMBL | EQU | 89F8 | | | |
| 0066 | INCRE | EQU | BOFC | | | |
| 0067 | PANIC | EQU | BIFC | | | |
| 0068 | MASK | EGU | B2FC | | | |
| 0069 | CORE | EQU | BJFC | | | |
| 0070 | BLANK | EQU | 84FC | | | |
| 0071 | ALOC | EGU | 85FC | | | |
| 0072 | MLOC | EQU | BOFC | | | |
| 0073 | CLOC | EQU | B7FC | | | |
| 0074 | DEXIT | EQU | Bafc | | | |
| 0075 | SIGN | EOU | 89FC | | | |
| 0076 | | | | | | |
| 0077 | R | EQU | BOFG | | | |
| 0078 | LINE | EOU | BIFG | | • | MILIM SOLICTART |
| 0079 | MCN | EGU | B2FG | | G | NUM CONSTANT |
| 0080 | MCZ | EQU | BJFG | | 9 | ZON CONSTANT |
| 0081 | MC | EQU | 84FG | | 3 | CON CONSTANT |
| - | OP | EOU | 85FG | | | |
| 0082 | IR | EQU | 86FG | | _ | |
| 0083 | TAPEI | EQU | 87FG | | G | LINE COUNTER IN INPUT BUFFER |
| 0084 | TCONT | EGU | Bafg | | G | CONTROL FOR TAPE BUFFER UNLOAD |
| 0085 | LTAPE | EGU | 99 F G | | G | LAST TAPE COMMAND |
| 0086 | TEX1 | EQU | BOFH | | | |
| 0087 | TEX | EQU | BIFH | | | |
| 0088 | AEX | EQU | B2FH | | | |
| 0089 | ALEV | EQU | 83FH | | | |
| 0090 | MLEV | EQU | 84FH | | | |
| 0091 | CLEV | EQU | BSFH | | | |
| 0092 | HTAG | EQU | ROFH | | | |
| 0093 | FTAG | EQU | 87FH | | | |
| 0094 | RTAG | EQU | BSFH | | | |
| 0095 | OPTIM | EQU | 89FH | | | |
| 0096 | SHR1 | EQU | BOAC | | | |
| 0097 | SHR2 | EQU | BIAC | | | |
| 0098 | LC | EQU | B2AC | | G | LINE COUNTER ON OUTPUT PAGE |
| | ~ ~ | | | | _ | का स्थापका । स्थापका स्थापका व्यापका स्थापका । स्थापका स्थापका स्थापका स्थापका । स्थापका स्थापका स्थापका स्थापका स्थापका । स्थापका स्थापका स्थापका स्थापका । स्थापका स्थापका स्थापका स्थापका । स्थापका स्थापका स्थापका स्थापका स्थापका स्थापका । स्थापका स्थापका स्थापका स्थापका स्थापका स्थापका । स्थापका |

| 0099 | | | | | | LINEO | EQU | BJAC | | | L DAME A DAME THE DAM |
|------|--------|-----|------|--------|-------------|-------|-----|-------|-------|------------|--|
| 0100 | - | | | | | | | | | G | LINE COUNTER IN OUTPUT BUFFER |
| 0101 | | | | | | FLAG | EQU | 84AC | | | |
| 0102 | | | | | | ACCUM | EOU | 85AC | | G | ERRORS ON LAST ERRONEOUS LINE |
| | | | 45 | | | MUMI | EQU | 86AC | | | |
| 0103 | , | | | | | MUML | EQU | B7AC | | | |
| 0104 | | | | | | COMI | | | | | |
| 0105 | | | | | | | EQU | BBAC | | | |
| 0106 | | | • | | | KEY | EQU | BOAC | | | |
| | | | | | | DK | EQU | BOAB | | | |
| 0107 | | | | | | HSB | EQU | 84AB | | | |
| 0108 | | | . 5 | | | HSB1 | EQU | BSAB | | | |
| 0109 | | | | | | | | | | | |
| 0110 | | | | | | BLA | EQU | BOAG | | G | CONTROL OPS STARTING LOCATIONS |
| | | | | | | BLR | EQU | BIAG | | | * |
| 0111 | | | | | | COR | EQU | B2AG | | | |
| 0112 | | | 4. | | | PSUDX | EQU | BJAG | | | |
| 0113 | | | | | | | | | | | |
| 0114 | | | | | | EQU | EQU | 84AG | | | |
| | | | | | | HHH | EQU | 85AG | | | |
| 0115 | | | | | | FLO | EQU | 86AG | | | |
| 0116 | | | | | | END | EQU | B7AG | | | |
| 0117 | | | | | | NEW | | | | | |
| 0118 | | | | | | | EOU | BBAG | | | |
| 0119 | | | | | | CON | EQU | BOAH | | | |
| | | | | | | NUM | EQU | BIAH | | | |
| 0120 | | | | | | ZON | EQU | B2AH | | | |
| 0121 | | | | | | PAT | EQU | BJAH | | | |
| 0122 | | | | | | | | | | | |
| 0123 | | | | | | ALF | EQU | B4AH | | | |
| | | | | | | OFF | EQU | BSAH | | | • |
| 0124 | | | | | | TYP | EQU | BOAH | | | |
| 0125 | | | | | | FUNNY | EQU | HABE | | | |
| 0126 | | | | | | BOP1 | EQU | | | | |
| 0127 | 8679 | 988 | 0 H | н нннн | نياد والوان | | | 89AH | | | |
| 0128 | BJFH | | | | HHHH | R0010 | CON | ННННН | HHHHH | | |
| | | 888 | 0 0 | | 0000 | ALEV | CON | 00000 | 00000 | | |
| 0129 | 84FH | 888 | | | 0000 | MLEV | CON | 00000 | 00000 | | |
| 0130 | BSFH | 888 | 0 0 | 0000 | 9000 | CLEV | CON | 00000 | 00000 | | ^ |
| 0131 | 85FC | 988 | | | 0000 | | | | | | |
| 0132 | BOFC | 888 | × 0 | | | ALOC | CON | 00000 | 00000 | | |
| 0133 | | | | | 0000 | MLOC | CON | 00000 | 00000 | | |
| | 87FC | 888 | | | 0000 | CLOC | CON | 00000 | 00000 | | |
| 0134 | B7AC | 888 | | | 0000 | MUML | CON | 00000 | 00000 | | |
| 0135 | BBAH | 886 | 0 00 | 2000 | 0000 | FUNNY | CON | 00200 | | G | BAAL SOOF GIRT BE ADDE |
| 0136 | BAAB | | | | 0000 | HSB | | | 00000 | _ | BOOA - B99F PART OF CORE USUALLY UNAVAILABLE |
| 0137 | BPAB | | | | | | CON | 22222 | 00000 | G | WHAT GADAAD CHOOSES FOR H |
| | 0 7 KD | 888 | U U | 0000 | 4000 | HSB1 | CON | 00000 | 04000 | G | HIGH-SPEED BANDS |
| 0138 | | | | | | | HHH | C | | - | |
| 0139 | 8712 | 998 | 0 60 | 81F8 | AOOA | SRCH# | STA | EXITI | | e . | EVMON TABLE SEABOU / CROUSE |
| 0140 | BOOA | 888 | 0 65 | Bafa | BOLA | | | | | 3. | SYMBOL TABLE SEARCH (SRCH#) |
| 0141 | BOLA | 888 | | | | | STX | EXIT2 | | | THIS SUBROUTINE LODKS UP A 5-CHARACTER |
| 0142 | | | | | ASOB | | STL | TEMP | | | QUANTITY TO SEE IF IT IS IN THE SYMBOL TABLE. |
| | 802A | 888 | | | 8713 | | CLA | | | | OP-CODES REGIONAL ADDRESSES PAIR ADDRESSES |
| 0143 | 8713 | | | | 803A | | SUB | RL | | | TE MELL TE EAMOULTY TUNDENSES THE THEM THE THE TANK THE T |
| 0144 | BOJA | 898 | 0 77 | 7 B03A | 804A | | ATL | | | | AS WELL AS SYMBOLIC ADDRESSES ARE KEPT IN THE |
| 0145 | BO4A | 888 | 0 85 | 8714 | 805A | | | 10010 | 01001 | | SYMBOL TABLE. THERE ARE TWO EXITS DEPENDING |
| 0146 | 805A | 858 | | | | | | 10010 | 01001 | | ON WHETHER THE SYMBOL IS OR IS NOT IN THE |
| 0147 | 806A | | | | 806A | | SHR | 0600 | | | TABLE. ALL REFERENCES TO THE SYMBOL TABLE |
| | | 858 | | | 807A | | IIR | OHHH | | | ARE MADE VIA SRCH+. |
| 0148 | 807A | 888 | 0 35 | 0000 | ASOE | | ERS | RX | | ci. | SCRAMBLE |
| | | | | | | | | 1 | | 349 | ~UNMITSEE |
| | | | | | | | | | | | |

| 0149 | | | | | | | | | |
|------|---------|-----|------|-------------|------|-------|-------------|---|--------|
| 0150 | Boba | 886 | 0 30 | BJFB | 9716 | | LDL | TEMP | &SR2 |
| 0151 | | | | | | | | | |
| 0152 | 9716 | 855 | 0 20 | 8717 | GOOA | &SR2 | SUF | | RA |
| 0153 | 9717 | 898 | 0 08 | 0000 | 8715 | | LIRI | 0000 | -SR2 |
| 0154 | 8715 | 888 | 0 29 | 1000 | 809A | -SR2 | | STAB | - 3H W |
| 0155 | BO9A | 888 | 0 82 | 8718 | | -314 | | | |
| 0156 | BIOA | | | | 810A | | TEQ | 3F | *** |
| | | 888 | 0 70 | 8719 | 8720 | | ADD | | -SR1 |
| 0157 | 8719 | 888 | 0 99 | 9999 | 9999 | | CON | 99999 | 99999 |
| 0158 | 8721 | 888 | 0 0G | 0023 | SILA | &SR1 | IIRI | 0023 | |
| 0159 | BILA | 858 | 0 70 | B722 | 3715 | | ADD | | -SR2 |
| 0160 | 8722 | 888 | 0 99 | 9000 | 0000 | | CON | 99900 | 00000 |
| 0191 | | | | | | | | | |
| 0162 | 8720 | 888 | 0 54 | 1000 | 81F8 | -SR1 | STLI | STAB | EXITI |
| 0163 | 8718 | 888 | 0 29 | 2000 | 82F8 | 3 | LDA1 | | EXIT2 |
| 0164 | | | | | | | | | |
| 0165 | | | | | | | | | |
| 0166 | | | | | | | | | |
| 0167 | | | - | | | | | | |
| 0168 | | | | | | | | | |
| 0169 | | | | | | | | | |
| 0170 | | | | | | | | | |
| | | | | | | | | | |
| 0171 | | | | | | | | | |
| 0172 | | | | | | | | | |
| 0173 | | | | | | | | | |
| 0174 | 8723 | 888 | 0 50 | BOFB | 812A | FARB* | STL | EXIT | |
| 0175 | 812A | 888 | 1 09 | B707 | 813A | | LDX3 | AH | |
| 0176 | 813A | 888 | 0 70 | 8724 | 814A | | ADD# | 00000 | 10000 |
| 0177 | 914A | 888 | 0 60 | 83F8 | 815A | | STA | TEMP | |
| 0178 | | | | | | | | • | |
| 0179 | 815A | 888 | 0 31 | 8725 | 8725 | | CLL | | |
| 0190 | 8725 | 888 | 0 50 | BIFC | 816A | | STL | PANIC | |
| 0181 | BIGA | - | 5 02 | 0000 | 8726 | | LIRO | 0000 | 2F |
| 0182 | 8726 | | 0 30 | 0000 | 8727 | 2 | LDL | RX | 3F |
| 0183 | 8727 | - | 0 50 | 8683 | 817A | 3 | STL | C000U | JP. |
| 0184 | 817A | | 0 25 | 8728 | 8184 | • | | | A0088 |
| 0185 | BISA | 888 | 0 82 | 8729 | 8730 | | LDA# TEQ | 00000 | 00888 |
| 0186 | 8729 | | | BOFH | | | | | 3F |
| 0187 | 819A | | 0 30 | | 819A | | LDL | HTAG | |
| 0188 | | 858 | | 3684 | AOSB | | TEO | V0000 | et- |
| | 820A | | 0 05 | 0008 | 8727 | | LDX | RL | 38 |
| 0189 | 8730 | 888 | | 8680 | BZIA | 3 | | U0000 | |
| 0190 | 821A | | 5 82 | 8684 | 822A | | TEQ6 | V0000 | |
| 0191 | 822A | 898 | | 0001 | 8730 | | IIR6 | 0001 | 38 |
| 0192 | 8680 | 898 | | 1000 | 0488 | U0000 | CON | 00100 | 00488 |
| 0193 | 8681 | 888 | 0 00 | 1000 | 0388 | U0001 | CON | 00100 | 00389 |
| 0194 | 8682 | 886 | | 1000 | 0888 | U0002 | CON | 00100 | 00383 |
| 0195 | 8687 | | | 0008 | 823A | V0003 | LDA | RL | A4883 |
| 0196 | 823A | 888 | _ | OOOA | 824A | ***** | SUB | RA | |
| 0197 | 824A | | 0 31 | 8731 | 8731 | | CLL | MA | |
| 0198 | 8731 | | 0 82 | 8732 | 825A | | | | |
| 32.0 | W 7 2 4 | COD | | 9172 | DEJA | | TEQ | 1F | |
| | | | | | | | | | |

- X THE SYMBOL IS CONVERTED TO A THREE-DIGIT NUM-BER TO INDICATE WHERE THE SEARCH WILL START.
- X THIS SPEEDS UP THE SEARCH CONSIDERABLY.
- 52. SYMBOL: TABLE
- EQ: IF THE SYMBOL IS AT THIS PLACE IN THE TABLE. GO TONDEF.

NEQI

- S3. TABLE: ZERO
- EQ: IF THE TABLE ENTRY IS ZERO.GO TOWS4.
- NEQIOTHERWISE WE MOVE TO THE NEXT TABLE ENTRY
- AND RETURN TO#S2.
- S4. NOT FOUND.
 - WE HAVE ENCOUNTERED A NEW SYMBOL SINCE THE
- X TABLE IS INITIALLY ALL ZEROES.
- X STORE THE NEW SYMBOL IN THE TABLE HERE AND GO TOWUNDEF.

CODING DETAILS:

- ON INPUT. RL IS THE SYMBOL. RA IS UNDEF.

 AND RX IS DEF. OUTPUT IN RB1 IS THE LOCATION
 IN THE TABLE. AND IF DEFINED THE EQUIVALENT
 OF THE SYMBOL APPEARS IN RA. THERE IS ROOM
 FOR 1000 SYMBOLS. IF THE 1001ST SYMBOL
 COMES ALONG. THE MACHINE LOOPS INDEFINITELY.
- F. FIND AND RESERVE BEST LOCATION (FARB*)
 THIS SUBROUTINE IS USED TO CHOOSE LOCATIONS
 FOR A M OR C ADDRESSES OF INSTRUCTIONS.
 THE CORRESPONDING H-FIELD IS INTERPRETED AND
- X THE CHOICE IS MADE ON THIS BASIS.
- FI. EXAMINE H-FIELD
- C : IF IT SPECIFIES C(CORE) GO TOMF4.
- IF IT SPECIFIES D(DRUM) OR IS BLANK.
 - GO TOAFS WITH RB6 SET TO O.
- H IF IT SPECIFIES H(HIGH SPEED BANDS).
- GO TO#F3 WITH R86 EQUAL TO 2.
- NNN:THREE NUMERICS OR +NN MEANS A HAND-PICKED LEVEL OR A CHANGE IN LEVEL ON THE DRUM:TO#F2. NN:TWO NUMERICS MEANS A HANDPICKED HIGH SPEED
- LEVEL. GO TOMF2. ERRIANY OTHER MEANS THE H-FIELD IS IN ERROR. GO TOMF3 AND TREAT AS BLANK.

| - | | | | | | | | | |
|--------------|--------------|----------------------|------|--------------|--------------|----------------------|------------|---|----|
| 0199 | 825A | 888 0 30 | 8733 | 826A | | LDL# 00000 | 00400 | | |
| 0200 | 826A | 898 0 82 | 8734 | 827A | | TEQ 3F | | | |
| 0201 | - | 888 1 OG | 0001 | 828A | | IIR3 0001 | | | |
| 0202 | 328A | 888 0 30 | 8735 | 8736 | | LDL | ERR1* | | |
| 0203 | 8735 | 888 1 OG | 9999 | 8684 | | IIR3 9999 | V0000 | | |
| 0204 | | 898 0 25 | 0008 | 829A | 1 | LDA RL | | | |
| 0205 | | 888 0 70 | 8737 | 8738 | | ADD | -NU | | |
| 0206 | 8737 | 888 0 00 | 7000 | 0000 | | CON 00700 | 00000 | | |
| 0207 | 8739 | 888 0 70 | BJFB | BJOA | ANU | ADD TEMP | | · | |
| 0208 | AOES | 888 0 60 | BJFB | 8684 | | STA TEMP | V0000 | | |
| 0209 | 8738 | 888 5 07 | 9998 | 831A | -NU | IIR6 9998 | | F2. USE HAND LEVEL | |
| 0510 | BJIA | 888 0 60 | BIFC | 832A | | STA PANIC | | THE H-FIELD SPECIFIES A HAND PICKED LEVEL. | |
| 0211 | 832A | 888 0 65 | 83F8 | 8740 | | STX TEMP | 2F | THIS SUPERCEDES THE LEVEL CALCULATED | |
| 0212 | 8734 | 888 0 25 | 8741 | 833A | 3 | LDA# 00000 | HHOOO | BY QADAAD. ALTHOUGH IT WILL BE CHECKED | |
| 0213 | 833A | 388 0 60 | BIFC | 834A | | STA PANIC | | LATER BY THE AJST* ROUTINE. | |
| 0214 | 834A | 888 0 35 | 000C | 835A | | ERS RX | | | |
| 0215 | 835A | 888 0 60 | 83F8 | 8740 | | STA TEMP | 2F | | |
| 0216 | 8740 | 888 5 07 | 9999 | 3684 | 2 | IIR6 999 9 | V0000 | | |
| 0217 | 8684 | 888 1 07 | 0000 | 8742 | V0000 | IIR2 0000 | 2F | F3. ADJUST FOR PAIRS | |
| 0218 | 8686 | 888 1 07 | 0000 | 8742 | V0002 | IIR2 0000 | 2F | IF RB2 CONTAINS 5 AT THIS POINT WE HAVE | |
| 0219 | 8742 | 888 0 70 | 8743 | 9744 | 2 | ADD | -F1 | A PAIR ADDRESS. AND RB6 IS INCREASED BY I. | |
| 0220 | | 888 0 99 | 9995 | 0000 | | CON 99999 | 50000 | THE CALCULATED LEVEL IS ADJUSTED 1 IF IT IS | j |
| 0221 | 8744 | 888 0 26 | 8746 | 8746 | -F1 | CLA 3F | | A MINUS-PAIR ADDRESS. RB6 IS NOW EQUAL TO: | |
| 0222 | | 868 5 07 | 0001 | 836A | &F1 | 11R6 0001 | | OI LOOK ON DRUM | |
| 0223 | | 888 3 07 | 0000 | 8746 | _ | 11R5 0000 | JF | 1: LOOK FOR PAIR ON DRUM | |
| 0224 | 8746 | 858 0 60 | 84F8 | 8747 | 3 | STA TEMP1 | -FARB | 2: LOOK FOR HIGH SPEED | |
| 0225 | | | | | | | | X 3: LOOK FOR PAIR ADDRESS IN HIGH SPEED AREA | ı |
| 0226 | | | | | | | | X THE SETTING OF REG IS USED TO CONTROL THE | |
| 0227 | m 4 0 # | **** | | ~ ~ ~ . | | | | X APPROPRIATE OPERATIONS BELOW. GO TO#F6. | |
| 0228 | 8685 | 888 1 07 | 0000 | 837A | V0001 | IIR2 0000 | 50 | F4. ROOM IN CORE | in |
| 0229 | 837A | 888 0 70 | 8749 | 8750 | | ADD | -F8 | IF RB2 CONTAINS 5 WE HAVE A PAIR ADDRESS AN | |
| 0230 0231 | 8749 8750 | 888 0 99 | 9995 | 0000 | -F8 | CON 99999 | 50000 | MUST RESERVE 2 LOCATIONS, OTHERWISE 1 LOCA- | , |
| 0232 | 8751 | 888 0 07 888 0 07 | 0001 | 8752 8752 | &F8 | IIR 0001 IIR 0002 | 1F 1F | TION IN CORE. IF THERE IS NO ROOM LEFT IN NO! THE BOOD-B999 AREA. A SEMICOLON ERROR | |
| 0233 | 8752 | 888 0 70 | BJFC | 838A | 1 | ADD CORE | ¥F. | INDICATION IS GIVEN AND WE TRY HIGH SPEED | |
| 0234 | 838A | 888 0 05 | 000A | 839A | • | LDX RA | | ACCESS BY GOING TOWFT. | |
| 0235 | BJ9A | 858 0 70 | 8753 | 8754 | | ADD | -F9 | YES: | |
| 0236 | 8753 | 888 0 99 | 9000 | 0000 | | CON 99900 | 00000 | 1631 | |
| 0237 | 8754 | 88B 0 65 | 83FC | 840A | -F9 | STX CORE | 00000 | F5. ASSIGN CORE ADDR. | |
| 0238 | B40A | 888 0 65 | BEAB | BULA | • • | STX RB9 | | CALCULATE THE EQUIVALENT OF THIS ADDRESS | |
| 0239 | 841A | 888 8 07 | 8999 | 842A | | IIR9 8999 | | AND THE ADDRESS ONE LESS IN CASE OF A PAIR | |
| 0240 | 842A | 888 0 60 | 8695 | 843A | | STA 10001 | | ADDRESS. #EXIT. | |
| 0241 | | 888 8 07 | 0001 | 8756 | | IIR9 0001 | FAREX | ADDITE DO A MONTH & | |
| 0242 | | 888 0 25 | 8758 | 844A | &F9 | LDA# 00000 | 00006 | | |
| 0243 | | 888 0 05 | 8759 | 8760 | • | LDX | ERR2* | | |
| 0244 | 8759 | 888 0 00 | 8761 | 8761 | | JMP | | | |
| 0245 | | 888 5 07 | 0001 | 8686 | | IIR6 0001 | V0002 | • | |
| 0246 | | 888 0 25 | BJFB | 845A | -FARB | LDA TEMP | * * | F6. INITIALIZE | |
| 0247 | | 888 0 37 | 0400 | 846A | | SHL 0400 | | CALCULATE THE STARTING DRUM LEVEL. AND ALSO | j |
| 0248 | | 888 0 70 | 84FB | 847A | | ADD TEMP1 | | MAKE AN EXTRA COPY OF LEVEL 199 AS LEVEL -1 | |
| | | | | • | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

| 0249 | 847A | 888 0 77 | 847A | 848A | | ATL | | |
|------|------|----------|------|------|----------|-------------|---|--|
| 0250 | 848A | 898 0 60 | B4AC | 849A | | STA FLAG | | |
| 0251 | 849A | 888 5 00 | 8641 | 8641 | | JMP6 F0016 | | IN CASE OF PAIR ADDRESS PROCESSING. |
| 0252 | 8642 | _ | | | 60013 | | 25 | IN CASE OF PAIN ADDRESS PROCESSING. |
| | | 888 0 85 | 8762 | 8763 | F0017 | MUL 15 | 2F | |
| 0253 | 3641 | 888 0 85 | 8762 | 8763 | F0016 | MUL 1F | 2F | |
| 0254 | 8762 | 888 0 00 | 0000 | OOAS | 1 | CON 00000 | 000A5 | |
| 0255 | 8763 | 88B 0 35 | 8764 | 850A | 2 | ERS# 0000H | H5000 | |
| 0256 | 850A | 888 0 70 | OODA | 9765 | | ADD RA | 3F | |
| 0257 | 8643 | 888 0 35 | 8766 | 8765 | F0018 | ers if | 3F | |
| 0258 | 9644 | 888 0 35 | 8766 | 8765 | F0019 | ERS IF | 3F | |
| 0259 | 8766 | 888 0 00 | OOCH | 0000 | 1 | CON OCCOC | H0000 | |
| 0260 | 8765 | 888 0 60 | BEAB | 851A | 3 | STA RB7 | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | · · |
| 0261 | 851A | 888 0 31 | 8767 | 8767 | • | CLL | | |
| 0262 | 8767 | 888 0 25 | 8617 | 852A | | LDA DOZOG | | |
| 0263 | 852A | 888 0 60 | 8417 | 8768 | | STA 00000 | -F2 | |
| 0264 | 8768 | 888 6 25 | 8418 | 853A | -F2 | | wr & | F7. TRY LEVEL |
| 0265 | ACCB | | 8629 | | -76 | | | |
| 0266 | | 888 5 00 | - | 8629 | Eagas | JMP6 F0004 | EO30# | OK: IF A DRUM ADDRESS SATISFYING ALL THE |
| | 8630 | 888 6 35 | 8417 | 3629 | F0005 | ER\$7 00000 | F0004 | REQUIREMENTS INDICATED BY RB6 EXISTS ON THIS |
| 0267 | 8631 | 888 6 20 | 8465 | 854A | F0006 | BUF7 00051 | | LEVEL. GO TOMP9. |
| 0268 | 854A | 888 6 20 | 8518 | 855A | | BUF7 00101 | | NO : |
| 0269 | 855A | 888 6 20 | 8568 | 8770 | _ | BUF7 00151 | 1F | |
| 0270 | 8770 | 888 0 35 | BHAB | 8629 | 1 | ers HSB | F0004 | |
| 0271 | 8632 | 888 6 35 | 8417 | 356A | F0007 | ERS7 00000 | | |
| 0272 | 856A | 888 0 05 | OOOA | 857A | | LDX RA | | |
| 0273 | 857A | 888 6 25 | 8468 | 858A | | LDA7 D0051 | | |
| 0274 | 858A | 888 6 35 | 8467 | 359A | | ERS7 00050 | | |
| 0275 | 859A | 88B 0 20 | 0000 | 860A | | BUF RX | | |
| 0276 | BOOA | 888 0 05 | OOOA | 861A | | LDX RA | | |
| 0277 | 861A | 888 6 25 | 8518 | 862A | | LDA7 00101 | | |
| 0278 | 862A | 888 6 35 | B517 | 863A | | ER\$7 D0100 | | |
| 0279 | 863A | 898 0 20 | 000C | 864A | | | | |
| 0280 | 864A | 888 0 05 | | | | | | |
| 0281 | | | 000A | 865A | | LDX RA | | |
| | 865A | 888 6 25 | 8568 | 866A | | LDA7 DO151 | | |
| 0282 | 866A | 888 6 35 | 8567 | 867A | | ER\$7 D0150 | | |
| 0283 | 867A | 898 0 20 | 0000 | 8770 | _ | BUF RX | 18 | |
| 0284 | 8629 | 898 0 82 | 8771 | 8772 | F0004 | TEO | 2F | |
| 0285 | 8771 | 888 0 25 | BIFC | 368A | | LDA PANIC | | F8. DRUM EXHAUSTED |
| 0286 | 868A | 888 0 82 | 8773 | 369A | | TEQ 3F | | IF THE LEVEL WAS HAND CALCULATED. A SEMICOLON |
| 0287 | 869A | 888 0 50 | BIFC | 870A | | STL PANIC | | ERROR IS INDICATED THE FIRST TIME STEP F8 |
| 0288 | BTOA | 888 0 25 | 6774 | 871A | | LDA# 00000 | 00006 | IS EXECUTED. |
| 0289 | 871A | 888 0 05 | 8775 | 8760 | | LDX | ERR2* | YESIIF WE HAVE GONE ALL THE WAY AROUND THE DRUM. |
| 0290 | 8775 | 888 0 00 | 8773 | 8773 | | JMP 3F | | |
| 0291 | 8773 | 888 6 07 | 0001 | 872A | 3 | 11R7 0001 | | A SEMICOLON ERROR IS GIVEN AND THE ADDRESS |
| 0292 | 872A | 898 5 70 | 8645 | 8768 | = | ADD6 F0020 | -F2 | 0000 IS ASSIGNED. TO#F11. |
| 0293 | 8645 | 888 0 99 | 9800 | 0000 | F0020 | CON 99980 | 00000 | PARTIF WE HAVE EXHAUSTED THE HIGH SPEED BANDS. |
| 0294 | 8646 | 888 0 99 | 9800 | 0000 | F0021 | CON 99980 | 00000 | A SEMICOLON ERROR IS GIVEN AND WE TRY THE |
| 0295 | 8647 | 88B 0 99 | | | | | | |
| 0296 | 3648 | _ | 9950 | 0000 | F0022 | CON 99995 | 00000 | WHOLE DRUM GOING TOMFO. |
| 0297 | | 888 0 99 | 9950 | 0000 | F0023 | CON 99995 | 00000 | NO: OTHERWISE WE STEP TO THE NEXT DRUM LEVEL |
| | 8769 | 888 0 25 | B4AC | 873A | &F2 | LDA FLAG | | AND RETURN TO#F7. |
| 0298 | 873A | 888 0 82 | 8776 | 874A | | TEO 1F | | |
| | | | | | | | | |

| | | - | | | | | | |
|------|------|-------|---------|------|--------|------|--------------|---|
| 0299 | 874A | 888 0 | 50 B4AC | 875A | | STL | FLAG | |
| 0300 | 875A | 888 6 | 02 0000 | 3768 | | LIR7 | 0000 | -F2 |
| 0301 | 8776 | 888 0 | 25 8777 | 876A | 1 | LDAN | 00000 | 00000 |
| 0302 | 876A | 888 0 | 05 8778 | 8760 | | LDX | | ERR2* |
| 0303 | 8778 | 888 0 | 00 8779 | 8779 | | JMP | | - |
| 0304 | 8779 | 898 5 | 07 9998 | 377A | | IIR6 | 9998 | |
| 0305 | 877A | 888 0 | 70 8780 | 8747 | | ADD | | -FARE |
| 0306 | 8780 | 888 0 | 99 9998 | 0000 | | CON | 99999 | 80000 |
| 0307 | 8748 | 888 0 | 26 8781 | 8781 | SFARB | CLA | | |
| 0308 | 8781 | 858 0 | 60 8695 | 3756 | | STA | 10001 | FAREX |
| 0309 | 8772 | 88B 5 | 00 8633 | 8633 | 2 | | F0008 | , |
| 0310 | 8635 | | 25 8418 | 8782 | F0010 | LDA7 | | 1F |
| 0311 | 8782 | 888 0 | 35 B4AB | 878A | 1 | ERS | H58 | • |
| 0312 | 878A | | 82 8783 | 3784 | • | TEO | | 2F |
| 0313 | 8783 | 888 6 | 07 0050 | 8772 | | IIR7 | 0050 | 28 |
| 0314 | 8636 | | 25 8418 | 379A | F0011 | LDA7 | | |
| 0315 | 879A | | 35 8417 | 3782 | **** | ERS7 | | 18 |
| 0316 | 8633 | | 25 8418 | 8784 | F0008 | | 00001 | 2F |
| 0317 | 8634 | | 25 8418 | ACBB | F0009 | LDA7 | | - |
| 0318 | BBOA | | 35 8417 | 8784 | , 4001 | ER57 | 00000 | 2F |
| 0319 | 8784 | | 05 000A | BBLA | 2 | LDX | RA | |
| 0320 | BBIA | | 35 8785 | 882A | - | ERS# | 66666 | GGGGG |
| 0321 | 882A | | 82 8786 | BEJA | | TEQ | 15 | 20204 |
| 0322 | ACBB | | 35 8787 | 884A | | ERS# | 99999 | 99999 |
| 0323 | 884A | | 82 8788 | 885A | | TEQ | 2 F | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| 0324 | 885A | | 35 8789 | 986A | | | 55555 | 55555 |
| 0325 | 886A | 888 0 | | 887A | | TEG | 3F | 50,500 |
| 0326 | 887A | | 25 8791 | 8792 | | LDA | | 45 |
| 0327 | 8791 | 888 0 | СН НННН | HHHH | | CON | CHHHH | ННННН |
| 0328 | 8790 | 888 0 | 25 8793 | ASSE | 3 | LDA# | ВНННН | ННННН |
| 0329 | ASSS | 888 0 | 30 B794 | 8792 | | LDL | | 4F |
| 0330 | 8794 | 888 0 | 00 2000 | 0000 | | CON | 00200 | 00000 |
| 0331 | 8788 | 888 0 | 25 8795 | 889A | 2 | LDAN | FHHHH | ННННН |
| 0332 | 889A | 888 0 | 30 8796 | 8792 | | LDL | | 4F |
| 0333 | 8796 | 888 0 | 00 4000 | 0000 | | CON | 00400 | 00000 |
| 0334 | 8786 | 856 0 | 25 8797 | 890A | 1 | LDA# | GHHHH | ННННН |
| 0335 | 890A | | 30 8798 | 8792 | | LDL | | 4F |
| 0336 | 8798 | | 00 6000 | 0000 | | CON | 00600 | 00000 |
| 0337 | 8792 | 888 0 | 50 BBAB | 891A | 4 | STL | R59 | |
| 95CO | 891A | 888 0 | 30 0000 | 892A | | LDL | RX | |
| 0339 | 892A | | 05 8799 | 8800 | | LDX | | 1F |
| 0340 | 8799 | 855 0 | нн нннн | HHHH | | CON | HHHHH | HHHHH |
| 0341 | 8800 | 888 0 | 60 B2FC | 993A | 1 | STA | MASK | |
| 0342 | 893A | | 35 0008 | 894A | | ERS | RL | |
| 0343 | 894A | | 82 8801 | 8802 | | TEQ | _ | 1F |
| 0344 | 8801 | | 07 0200 | 895A | | IIR9 | 0200 | - |
| 0345 | 895A | | 25 B2FC | B96A | | LDA | MASK | |
| 0346 | 896A | | 32 0100 | 0086 | | SHR | 0100 | 18 |
| 0347 | 8802 | 888 5 | | 8637 | 1 | | F0012 | |
| 0348 | 8639 | 638 6 | 25 6418 | 897A | F0014 | | 10000 | |
| | | | | | | | | |

F9. CALCULATE ADDRESS

WE TRY TO FIGURE OUT WHAT DRUM ADDRESS WE
HAVE FOUND. PICKING THE SMALLEST ACCEPTABLE
ADDRESS ON THIS LEVEL. A SINGLE WORD OF
40 BITS IS KEPT FOR EACH DRUM LEVEL.
CORRESPONDING TO BANDS OF THRU 78. THE 5-BITS
COVER BANDS OF THRU 18. 4-BITS 20 THRU 38.
AND SO ON.

FIO.RESERVE ADDRESS.

FOR A PAIR ADDRESS THE ADDRESS IN THIS BAND

| 0349 | 897A 886 | 0 35 | B2FC | 3637 | | ERS | MASK | F0012 | ON TWO ADJACENT LEVI |
|--------------|----------|------|--------------|--------------|-------|------|-------------|---------------|---|
| 0350 | 8638 888 | 6 25 | 8417 | 8803 | F0013 | LDA7 | 00000 | 1F | OTHERWISE A SINGLE |
| 0351 | 8640 888 | | 8417 | 8803 | F0015 | | D0000 | 15 | TURNING ITS SIT OFF |
| 0352 | | 0 35 | 82FC | 898A | 1 | ERS | MASK | • | OPERATION, LEVELS - |
| 0353 | | 6 60 | 8417 | 8639 | - | | D0000 | F0014 | AS LEVEL 199. |
| 0354 | 8637 888 | 6 60 | 8418 | 899A | F0012 | STA7 | | | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| 0355 | | 0 25 | 8417 | BOOF | . • | LDA | 00000 | | |
| 0356 | | 0 35 | 8617 | BOIF | | ERS | 00200 | | |
| 0357 | 801F 888 | | 8617 | 802F | | STA | 00200 | | |
| 0358 | 802F 888 | 6 07 | 0000 | 303F | | IIR7 | 0000 | | |
| 0359 | 803F 888 | 0 31 | 8804 | 8804 | | CLL | | | |
| 0360 | 8804 888 | 0 82 | 8805 | 8806 | | TEO | | 1F | FIL.FINISH UP |
| 0361 | 8805 888 | 0 07 | 0199 | 8807 | | IIR | 0199 | 2F | CALCULATE THE ADDRES |
| 0362 | 806 888 | | 8086 | 8807 | 1 | SUB | | 2F | FOUND IN CASE OF A |
| 0363 | | 0 00 | 0001 | 0000 | | CON | 00000 | 10000 | ADDRESS: ANDMEXIT. |
| 0364 | 8807 888 | | BBAB | BO4F | 2 | ADD | R89 | | |
| 0365 | 804F 888 | | 8695 | 905F | | STA | 10001 | | CODING DETAILS: |
| 0366 | 805F 888 | 6 07 | 0000 | 806F | | IIR7 | 0000 | | INDEX REGISTERS 1 2 |
| 0367 | 806F 886 | | BBAB | 8756 | | ADD | R89 | FAREX | FARB+. ON INPUT THE |
| 8000 | 8756 886 | 0 06 | 8809 | 8809 | FAREX | CLX | | | BY RB3. THE CALCULAT |
| 0369 | 8809 888 | 0 60 | 8694 | 807F | | STA | 10000 | | RA+ AND THE EXIT IS |
| 0370 | 807F 886 | 0 60 | 8696 | BOSF | | STA | 10002 | | LOCATION FOUND IS I |
| 0371 | 808F 886 | 0 32 | 0400 | aofe | | SHR | 0400 | EXIT | LOCATION IS STORED |
| 0372 | 8810 986 | | 8706 | 80 9F | FIND* | LDAJ | A | | Q. MASTER ADDRESS CALCI |
| 0373 | 809F 888 | | 87FB | BIOF | | STX | DEFX | | THIS SUBROUTINE IS |
| 0374 | 810F 888 | | 88F8 | 811F | | STL | UDEFX | | THE SYMBOLIC A.M. DI |
| 0375 | 811F 858 | | 89F8 | 812F | | STA | SYMBL | | ANALYZES IT. THERE |
| 0376 | 812F 886 | - | 8811 | 313F | | LDL# | 00000 | 88363 | TO WHETHER THE ADDRE |
| 0377 | 813F 888 | | 8812 | 914F | | TEO | BLNK | | GI. WHAT KIND |
| 0378 | 814F 898 | | 9813 | 815F | | | 20000 | 8888 8 | BLK: IF BLANK GO TO#Q2. |
| 0379 | 815F 88E | | 8814 | 816F | | TEQ | SELF | | ** IF SELF. GO TOWQ3. |
| 0380 | 816F 886 | | 8815 | 817F | | | H0000 | H0000 | REGIIF FOUR RIGHTHAND PA |
| 0381 | 817F 888 | | 9916 | 818# | | | 00000 | 80000 | ABSITF THE LEFTMOST CHAP |
| 0382 | | 0 82 | 8817 | 619F | | TEQ | ABS | | GO TO#Q5. |
| 0383 | | 0 25 | BOFB | 320F | | LDA | SYMBL | | NF: IF LOCAL FORWARD ADD |
| 0384 0385 | | 0 35 | 9818 | 821F | | | 00000 | 03333 | NB: IF LOCAL BACKWARD AD |
| | | 0 C1 | 821F | 822F | | MTX | | | N: IF LOCAL PLAIN ADDRE |
| 0386 0387 | | 0 20 | 8819 | 823F | | | ОНННН | 00000 | +-! IF PAIR ADDRESS . SET |
| 0388 | | 0 35 | 89F8 | 324F | | ERS | SYMBL | 08084 | NX: IF THE SYMBOL FAILS |
| 0389 | 825F 888 | | 8820 8821 | 825F | | | ОНННН | 04444 | BEGINS WITH A NUMER! |
| 0390 | 8821 888 | | BOFC | 8521 826F | | CLL | THERE | | SYMIOTHERWISE IT IS SYME |
| 0391 | 826F 898 | | 8622 | 827F | | STL | INCRE | | AND GO TO#Q10. |
| 0392 | | 0 25 | 89F8 | | | TEG | REG | | |
| 0393 | 828F 858 | | | 828F | | LDA | SYMBL | UBAGA | |
| 0394 | 829F 888 | | 8823 | 829F | | | | H0000 | |
| 0395 | 830F 888 | | 83A8 8824 | 930F | | STA | RB5 | **** | |
| 0396 | | 0 C1 | 831F | 3315 | | | 00000 | 30000 | |
| 0397 | | 0 20 | 8825 | 832F | | MTX | نى ئىللىنىد | # ! | |
| 0398 | | 0 35 | | 833F | | | HHHHH | ОНННН | |
| V. 70 | 0-74 555 | | 89F8 | 834F | | ERS | SYMBL | | |
| | | | | | | | | | |

VELS IS RESERVED. ADDRESS IS RESERVED. BY F IN THE TABLE. AFTER THE -1 AND 199 ARE COMBINED

ESS ADJACENT TO THE ONE POSSIBLE MINUS-PAIR

2 AND 3 ARE NOT CHANGED BY E H FIELD IS SPECIFIED ATED BEST DRUM LEVEL IS IN S IN RL. THE OUTPUT IN RA AND AN ADJACENT IN A SPECIAL TABLE.

CULATOR (FIND#) GIVEN THE CONTENTS OF OR C FIELD OF THE CARD AND ARE TWO EXITS. ACCORDING RESS IS DEFINED OR NOT.

PARTS ARE NUMERIC. TONG4. ARACTER IS BLANK . HOWEVER .

DDRESS, TORGT.

ADDRESS. TOHOS.

RESS N. TOMO9.

RB2 TO 5 AND GO TO#GIO.

TO PASS THE ABOVE AND IC. GO TOMOG.

BOLICI WE SET REZ TO 4

| = | | - - | | | | | | |
|------|------|----------------|------|------|-------|------------|---------------|---|
| 0399 | 834F | 888 0 35 | 8826 | 835F | | ERS# HHHHH | 4HHHH | |
| 0400 | 835F | 888 0 30 | 8827 | 836F | | LDL# 01000 | 06888 | |
| 0401 | 836F | BBB 0 82 | 8828 | 837F | | TEQ LOCF | 00200 | |
| 0402 | 837F | 888 0 30 | 8829 | 838F | | LDL# 01000 | 02858 | |
| 0403 | 838F | 688 0 82 | 8830 | 839F | | TEO LOCE | 42000 | |
| 0404 | 839F | 888 0 30 | 8831 | 840F | | LDL# 00000 | 08888 | |
| 0405 | 840F | 858 0 82 | 8632 | 841F | | TEO LOCL | 7000 | |
| 0406 | 841F | 888 0 25 | 89F5 | 842F | | LDA SYMBL | | |
| 0407 | 842F | 888 0 35 | 8833 | 843F | | ERS# H0000 | H0000 | |
| 0408 | 843F | 888 0 30 | 8834 | 844# | | LDL# 10000 | CO200 | |
| 0409 | 844F | 888 0 82 | 8835 | 845F | | TEQ PLUS | 0000 | |
| 0410 | 845F | 888 0 30 | 8836 | 846F | | LDL# 00000 | A000 0 | |
| 0411 | 846F | 898 0 82 | 8837 | 847F | | TEO MINUS | Action | |
| 0412 | 847F | 888 0 31 | 8838 | 8888 | | CLL | | |
| 0413 | 8838 | 888 0 35 | 8839 | 848F | | ERS# H0000 | 00000 | |
| 0414 | 848F | 888 0 82 | 8840 | 849F | | TEG ADERR | •••• | |
| 0415 | 849F | 888 1 02 | 0004 | 8841 | | LIR2 0004 | LOOK 1 | |
| 0416 | 8837 | 888 3 02 | 0001 | 8842 | MINUS | LIR5 0001 | 1F | |
| 0417 | 8835 | 888 J 02 | 0000 | 9842 | PLUS | LIR5 0000 | 1F | |
| 0418 | 8842 | 888 1 02 | 0005 | 3841 | 1 | LIR2 0005 | LOOK 1 | |
| 0419 | 8812 | 888 0 31 | 8843 | 8843 | BLNK | CLL | | Q2. BLANKIZERO |
| 0420 | 8843 | 888 0 25 | B4FC | 850F | | LDA BLANK | | EQL: IF 'BLANK' IS ZERO, THE BLANK ADDRESS IS |
| 0421 | 850F | 888 1 02 | 0002 | 9844 | | LIR2 0002 | FEX | UNDEFINED, AND WE GO TOMUNDEF. |
| 0422 | 8844 | 888 0 82 | 88F8 | 87F8 | FEX | TEQ UDEFX | DEFX | NEG: ELSE TOMBEF. |
| 0423 | 8814 | 888 0 25 | 85FC | 87F8 | SELF | LDA ALOC | DEFX | Q3. 'A' LOCATION |
| 0424 | | | | | | | | X THE * IS DEFINED AS THE VALUE OF A LOCATION. |
| 0425 | | | | | | | | X IF IT APPEARS IN A, OR IN CERTAIN CONTROL OPS |
| 0426 | | | | | | | | X IT IS THE VALUE OF THE PRECEDING A LOCATION. |
| 0427 | | | | | | _ | | X TO#DEF. |
| 0428 | 8622 | 888 0 25 | 89FB | 851F | REG | LDA SYMBL | | Q4. CHANGE TO ROODO. |
| 0429 | 851F | 898 0 35 | 8845 | 852F | | ERS# 00000 | OHHHH | CHANGE THE REGIONAL ADDRESS TO ROODO AND SET |
| 0430 | 852F | 888 0 60 | BOFC | 853F | | STA INCRE | | RB2 TO ZERO. WE GO THEN TO LOOK THIS UP |
| 0431 | 853F | 958 0 25 | 89F8 | 854F | | LDA SYMBL | | IN THE SYMBOL TABLE. AT STEP#Q10. |
| 0432 | 854F | 888 0 35 | 8846 | 855F | | ERS# H0000 | H0000 | |
| 0433 | 855F | 888 1 02 | 0000 | 8847 | | LIR2 0000 | LOOK | |
| 0434 | 3817 | 88B 0 25 | 89F8 | 856F | ABS | LDA SYMBL | | 95. PROCESS ABS ADDR. |
| 0435 | 856F | 888 0 31 | 8848 | 8848 | | CLL | | BAD: IF ANY PART OF THE ADDRESS IS BLANK OR |
| 0436 | 8848 | 858 0 35 | 8849 | 857F | | ERS# 02222 | 00000 | HAS ZONES OF 2 OR 3. GO TONGS. OTHERWISE |
| 0437 | 857F | 855 0 82 | 8850 | 8840 | | TEQ | ADERR | USE THE ZONES TO PRODUCE UNDIGITS FOR ABCFGH. |
| 0438 | 8850 | 855 0 25 | 89F8 | 858F | | LDA SYMBL | | OK! AND SEND THE RESULTING ADDRESS TOWDEF. |
| 0439 | 858F | 888 0 35 | 8851 | 859F | | ersa hhhhh | OHHHH | |
| 0440 | 859F | 888 0 75 | 000A | 860F | | SUB RA | | |
| 0441 | 860F | 888 0 82 | 8852 | 8840 | | TEO 1F | ADERR | |
| 0442 | 8840 | 888 0 30 | 8853 | 8736 | ADERR | LDL | ERR1+ | 96. ERROR |
| 0443 | 8853 | 888 0 26 | 87F8 | 87F9 | | CLA DEFX | | SET UP ERROR FLAG FOR CURRENT FIELD |
| 0444 | 9852 | 888 0 25 | 89FB | 361F | 1 | LDA SYMBL | | AND SET THE ADDRESS TO ZERO. TO#DEF. |
| 0445 | 861F | 888 0 35 | 8854 | 862F | | ER5# 01111 | 00000 | |
| 0446 | 862F | 858 0 70 | 000A | 363F | | ADD RA | | |
| 0447 | 863F | 888 0 70 | AOOO | 864F | | ADD RA | | |
| 0448 | 864F | 888 0 32 | 0500 | 865F | | SHR 0500 | | |
| | | | | | | | | |

| 0449 | 865F | 888 0 20 | 89F8 | 866F | | BUF : | SYMBL | | |
|-------------------------------|--------------|----------------------|------|--------------|--------|--------------|----------|--------|---|
| 0450 | 866F | 888 0 35 | | 87F8 | | ERS | 9 | DEFX | |
| 0451 | 8855 | 38B 0 00 | | нннн | | | 00000 | ОНННН | |
| 0452 | 8828 | 888 3 25 | | 867F | LOCF | LDA5 | | | 97. I(N):ZERO |
| 0453 | 867F | 888 0 31 | | 8856 | | CLL | | | EQ: IF THE FORWARD LOCAL TABLE ENTRY FOR N IS |
| 0454 | | | | | | D . — | | | X ZERO IT IS UNDEFINED . WE GO TOMUNDEF. ELSE IT |
| 0455 | 8856 | 888 1 02 | 0001 | 8844 | | LIR2 | 0001 | FEX | NEG: IS DEFINED AND#DEF. |
| 0456 | 8830 | 888 3 25 | 8659 | 368F | LOCB | | J0000 | | G8. J(N) IZERO |
| 0457 | 868F | 888 0 31 | 8857 | 8857 | | CLL | | | EQ: IF THE BACKWARD LOCAL TABLE ENTRY FOR N IS |
| 0458 | | | | | | | | | X ZERO IT IS UNDEFINED AND WE GO TOMGE SINCE |
| 0459 | | | | | | | | | X THIS SHOULDNOT HAPPEN. ELSE IT IS A |
| 0460 | 8857 | 888 0 82 | | 87 F8 | | TEG | ADERR | DEFX | NEGIDEFINED ADDRESS WHICH IS SENT TOMDEF. |
| 0461 | 8832 | 898 3 25 | | 869F | LOCL | LDA5 | 10000 | | Q9. I(N):ZERO |
| 0462 | 869F | 888 0 31 | | 8858 | | CLL | | | EQ: IF THE FORWARD LOCAL TABLE ENTRY FOR N IS |
| 0463 | 8858 | 888 J 50 | | 870F | | STL5 | | | ZERO THIS ADDRESS IS UNDEFINED. GO TOHUNDEF. |
| 0464 | 870F | 888 1 02 | | 871F | | | 0003 | | NEGIELSE IT IS DEFINED AND WE TRANSFER IT TO THE |
| 0465 | 871F | 858 0 82 | | 872F | | | UDEFX | | BACKWARD LOCAL TABLE AND EXIT TOWNER. |
| 0466 | 872F | 888 3 60 | | 87F8 | | | 10000 | DEFX | IN EITHER CASE RESET FORWARD LOCAL ENTRY O. |
| 0467 | 8841 | 888 0 25 | | 8847 | LOOK 1 | | SYMBL | FOOK | Q10.SRCH* |
| 0468 | 8847 | 898 0 77 | 8847 | 873F | LOOK | ATL | | | SEARCH FOR THE ITEM IN THE SYMBOL TABLE. |
| 046 9 0470 | 873F | 88B 0 25 | | 874F | | | UDEFX | CBALLA | DEFIIF FOUND. GO TOWDEF, ADJUSTING FOR REGIONAL |
| 0470 | 874F 8859 | 898 0 05 | | 8712 | | LDX | | SRCH* | ADDRESS IF NECESSARY. IF NOT FOUND. WE GO |
| 0472 | 375F | 888 0 70 | | 875F | | | INCRE | 0554 | UND: TO #UNDEF. |
| 0473 | 8860 | 888 0 35 888 0 00 | | 87F8 | | ERS | 30000 | DEFX | |
| 0474 | 9450 | 999 0 00 | 0000 | ннин | | CON (| 00000 | ОНННН | |
| 0475 | | | | | | | | | CODING DETAILS! |
| 0476 | | | | | | | | | X INPUT TO FIND* IS DEF IN RX AND UNDEF IN RL. |
| 0477 | | | | | | | | | X RB3 CONTAINS THE FIELD TO BE EXAMINED. |
| 0478 | | | | | | | | | AT EXIT DEF. RA CONTAINS THE DEFINED X EQUIVALENT IN ITS C ADDRESS POSITION. |
| 0479 | | | | | | | | | X AT EXIT UNDEF+ RB2 CONTAINS INFORMATION |
| 0480 | | | | | | | | | X ABOUT THE TYPE OF ADDRESS AS FOLLOWS: |
| 0481 | | | | | | | | | OI REGIONAL |
| 0482 | | | | | | | | | X 1: LOCAL FORWARD N IS IN RB5 |
| 0483 | | | | | | | | | X 2: BLANK |
| 0484 | | | | | | | | | X 31 LOCAL PLAIN N IS IN RB5 |
| 0485 | | | | | | | | | X J: SYMBOLIC SPOT IN SYMBOL TABLE IS RBI |
| 0486 | | | | | | | | | X K: PAIR ADDRESS RBD IS O FOR 4. 1 FOR |
| 0487 | 9861 | 988 1 00 | 8619 | 8619 | DEFN* | JMP2 E | 20000 | | D. DEFINE ADDRESS (DEFN#) |
| 0488 | | | | | | · | | | X THIS SUBROUTINE IS USED AFTER FIND* HAS |
| 0489 | | | | | | | | | X DETERMINED AN ADDRESS IS UNDEFINED. IF THIS |
| 0490 | | | | | | | | | X IS NOT AN ERROR CONDITION. SOME WAY OF |
| 0491 | | | | | | | | | X CALCULATING AN ADDRESS, USUALLY FARB+, IS |
| 0492 | 2412 | 368 A AT | A64. | | | | . | | X USED AND THEN THIS ROUTINE DEFN+ TAKES OVER. |
| 04 93 04 9 4 | 8619 | 888 0 05 | | 376F | E0000 | LOX R | | | 01. WHAT TYPE |
| 0494 | 876F | 888 0 25 | | 877F | | LDA# C | | 10000 | REGIST THE ADDRESS TO BE DEFINED IS REGIONAL. |
| 0475 | 877F | 888 0 75 | | 378F | | | INCRE | | GO TOND2. |
| 0497 | 878F | 888 0 32 | | 379F | | | 0F00 | | NF: IF LOCAL FORWARD ENTER IN I TABLE ANDWEXIT. |
| 0498 | 879F 880F | 888 0 70 | | 880F | | | ₹X | F005" | BLKIIF BLANK . ENTER IN 'BLANK' ANDHEXIT. |
| V770 | 56UF | 888 0 35 | 8863 | 8623 | | ERS | | E0004 | N: IF LOCAL PLAIN, ENTER IN J TABLE ANDMEXIT. |
| | | | | | | | | | |

| - | | _ | | | | | | | |
|--------------|---------------|----------|------|------|-------|------|-------|------------|---|
| 0499 | 8863 | 358 0 00 | 0000 | HHHH | | CON | 00000 | ОНННН | SYMIF SYMBOLIC: ENTER IN EQUIVALENTS TABLE: #EXIT |
| 0500 | 8620 | 888 3 60 | 8649 | 0008 | E0001 | STA5 | 10000 | RL | +-: IF PAIR ADDRESS. GO TO#D3. |
| 0501 | 8621 | 388 0 60 | 84FC | 300B | E0002 | STA | BLANK | RL | D2. CALCULATE BASE |
| 0502 | | | | | | | | | X REGIONAL ADDRESSES ARE DEFINED ONLY BY |
| 0503 | | | | | | | | | X CONTROL OPS LIKE BLR. THE DEFINING ADDRESS |
| 0504 | | | | | | | | | X MINUS THE INCREMENT. THE ADDRESS CORRESPON- |
| 0505 | | | | | | | | | X DING TO ROODO IS STORED IN THE |
| 0506 | | | | | | | | | X EQUIVALENTS TABLE. MEXIT. |
| 0507 | 8622 | 888 J 60 | 8659 | 0008 | E0003 | STAS | 10000 | RL | |
| 0508 | 8623 | 888 Q 64 | 2000 | 0008 | E0004 | STAI | EATB | RL | |
| 0509 | 8624 | 888 0 50 | Bafc | 881F | E0005 | STL | DEXIT | | D3. STORE TWO. |
| 0510 | 881F | 888 3 25 | 8694 | 882F | | | 10000 | | THE DEFINED ADDRESS IS STORED IN THE SYMBOL |
| 0511 | 862F | 888 0 06 | 8864 | 3864 | | CLX | | | TABLE. THEN & IS CHANGED TO - OR VICE VERSA |
| 0512 | 8864 | 888 0 32 | 0400 | 993F | | SHR | 0400 | | AND THAT SYMBOL PLUS ITS EQUIVALENT ARE ALSO |
| 0513 | 883F | 888 0 64 | 2000 | 884F | | | ETAB | | STORED AWAY. THE ASSUMPTION IS MADE THAT |
| 0514 | 884F | 888 0 60 | 84FB | 385F | | STA | TEMP1 | | FARB* WAS USED TO CALCULATE THE ADDRESSES. |
| 0515 | 885F | 88B 0 29 | 1000 | 386F | | LDAI | STAB | | #EXIT. |
| 0516 | 886F | 888 3 00 | 8697 | 8697 | | | 10003 | | CODING DETAIL! |
| 0517 | 8697 | 888 0 35 | 8865 | 8866 | 10003 | ERS | | 15 | THE EXIT IS INPUT IN RL AND THE CALCULATED |
| 0518 | 8865 | 888 0 OH | HHHA | HHHH | | CON | ОНННН | AHHHA | ADDRESS IN RA. OTHER INPUTS ACTUALLY USED |
| 0519 | 8698 | 888 0 20 | 8867 | 3866 | 10004 | BUF | | 1F | ARE RB2 TO TELL THE TYPE. AND RB1 AND RB5 TO |
| 0520 | 8867 | 888 0 10 | 000C | 0000 | | CON | 10000 | C0000 | GIVE EXTRA INFORMATION AS SUPPLIED BY THE |
| 0521 | 8866 | 888 0 77 | 8866 | 887F | 1 | ATL | | | FIND* SUBROUTINE. AT EXIT. RA CONTAINS THE |
| 0522 | 887F | 888 Q 25 | 8868 | 8712 | | LDA | | SRCH* | DEFINED EQUIVALENT. |
| 0523 | 8868 | 888 0 00 | 8869 | 8869 | | JMP | | | |
| 0524 | 8869 | 888 3 25 | 8695 | 888F | | LDAS | 10001 | | |
| 0525 | Besf | 888 0 06 | 8870 | 3870 | | CLX | | | |
| 0526 | 8870 | 888 0 32 | 0400 | 889F | | SHR | 0400 | | |
| 0527 | 8 89 F | 888 0 64 | 2000 | 890F | | STAI | ETAB | | |
| 0528 | 890F | 888 0 25 | 84F8 | BBFC | | LDA | TEMP1 | DEXIT | |
| 0529 | 8871 | 888 0 50 | 80F3 | 891F | *TZLA | STL | EXIT | | A. AJST* SUBROUTINE. |
| 0530 | | | | | | | | | X THIS SUBROUTINE IS PART OF THE WAY GADAAD |
| 0531 | | | | | | | | | X FINDS LATENCY. AJST* IS USED ON M AND C |
| 0532 | | | | | | | | | X ADDRESSES. FIRST AN OPTIMUM LEVEL |
| 0533 | | | | | | | | | X 'OPTIM' IS CALCULATED BY GADAAD; AJST* USES |
| 0534 | | | | | | | | | X THIS TO FIND THE CURRENT LEVEL. GIVEN THE |
| 0535 | | | | | | _ | | | X ACTUAL M OR C ADDRESS. |
| 0536 | 891F | 888 0 30 | 000A | 892F | | LDL | RA | | AL. WHAT TYPE ADDRESS |
| 0537 | 892F | 88B 0 25 | 8872 | 8873 | | LDA | | 8 F | OOOA IF THE ASSIGNED ADDRESS D HAS ANY UNDIGITS |
| 0538 | 8872 | 888 1 00 | 0000 | 0000 | _ | - | 00000 | 00000 | IT IS ASSUMED TO BE IMMEDIATE ACCESS AND |
| 0539 | 8873 | 888 0 70 | 0008 | 893F | 8 | ADD | RL | | OPTIMO IS THE ANSWER. MEXIT. |
| 0540 | 893F | 888 0 82 | 8874 | 894F | | TEO | 1F | | 4000 IF THE ASSIGNED ADDRESS D IS ON THE HIGH- |
| 0541 | 894F | 888 0 25 | 89FH | BOFB | _ | LDA | OPTIM | EXIT | SPEED BANDS: GO TOHAZ. |
| 0542 | 8874 | 888 0 60 | 84F8 | 895F | 1 | STA | TEMPL | 10000 | ODODIF THE ASSIGNED ADDRESS D IS ON THE STANDARD |
| 0543 | 895F | 888 0 70 | 8875 | 896F | | | 00000 | 10000 | PART OF THE DRUM. D IS THE ANSWER. GO TOWAS. |
| 0544 | 896F | 888 0 75 | BOFH | 897F | | SUB | OPTIM | | A2. FIGURE DRUM ROLL |
| 0545 | 897F | 888 0 60 | BJFB | 898F | | STA | TEMP | | THE ANSWER IS D-OPTIM MODULO 50. |
| 0546 0547 | 898F | 888 0 25 | 0008 | 899F | | LDA | RL | AHADA | ADDED TO OPTIM. |
| 0548 | 899F | 888 0 35 | 8876 | 8877 | | ERS# | _ | 0000 | |
| UJTO | 8877 | 888 0 30 | BAAB | 8878 | | LDL | H581 | | |

| 0549 | 8878 | 888 | Q | 82 | 8879 | 880 | | TEC | 1F | |
|------|------|-----|---|----|------|-------|-------------------------|------|------------|----------------------|
| 0550 | 8880 | 898 | 0 | 30 | 83F8 | 5881 | | LDL | TEMP | |
| 0551 | 3881 | 888 | ō | 85 | 8882 | 8883 | | MULA | 00000 | 0AQ05 |
| 0552 | 8883 | 898 | 0 | 30 | 2000 | 3884 | | LOL | RX | |
| 0553 | 8884 | 333 | a | 25 | 8885 | 8886 | | LDA | ••• | 2 F |
| 0554 | 8885 | 888 | ŏ | 99 | OAOO | 0000 | | CON | 990AÛ | 00000 |
| 0555 | 8879 | 888 | ā | 25 | BJFB | 3887 | 1 | LDA | TEMP | |
| 0556 | 8887 | 888 | ō | 35 | 8888 | 3889 | • | ERS# | 00000 | OOOCH |
| 0557 | 8889 | 358 | ŏ | 77 | 8889 | 8890 | | ATL | 00000 | 0000 |
| 0558 | 8890 | 888 | | 70 | 89FH | 8891 | | ADD | OPTIM | |
| 0559 | 8891 | 888 | ā | 60 | 84F8 | 3892 | | STA | TEMP1 | |
| 0560 | 8892 | 888 | ō | 25 | 8893 | 3886 | | LDA | 1 Carrie W | 2F |
| 0561 | 8893 | 858 | ō | 00 | 0000 | 0048 | | CON | 00000 | 00048 |
| 0562 | 8886 | 888 | Ö | 87 | 8894 | 8895 | 2 | TGR | 1F | 000.0 |
| 0563 | 8895 | 888 | ŏ | 25 | 8896 | 8897 | | LDA# | 00000 | 0000A |
| 0564 | 8897 | 888 | ŏ | 05 | 8894 | a760 | | LDX | 1F | ERR2* |
| 0565 | 8894 | 888 | ā | 25 | 84FB | 3898 | 1 | LDA | TEMPI | Product. |
| 0566 | 8986 | 888 | ā | 35 | 8899 | BOFB | • | ERS | 1 Ctor. | EXIT |
| 0567 | 8899 | 888 | ŏ | õõ | 0000 | OHHH | | CON | 00000 | ООННН |
| 0568 | 8900 | 688 | | 50 | B901 | 3903 | OTPT* | STL | -OEX | 00111111 |
| 0569 | 8903 | 888 | ō | 77 | 8903 | 8904 | 5 1 . 1 7 | ATL | -04/4 | |
| 0570 | 8904 | 886 | ō | 25 | BJAC | 3905 | | LDA | LINEO | |
| 0571 | 8905 | 888 | ō | 20 | B906 | 000A | | BUF | C Turnia | RA |
| 0572 | 8906 | 888 | ŏ | 08 | 0000 | 8907 | | LIRI | 0000 | 110 |
| 0573 | 8907 | 888 | Ö | 69 | 4803 | 8908 | | STXI | 70003 | |
| 0574 | 8908 | 856 | | 50 | 84F8 | 8909 | | STL | TEMP1 | |
| 0575 | 8909 | 888 | | 65 | 85F8 | 8910 | | STX | TEMP2 | |
| 0576 | 8910 | 898 | | OG | 0004 | 3911 | | IIRI | 0004 | |
| 0577 | 8911 | 888 | ā | 60 | BJAC | 3912 | | STA | LINEO | |
| 0578 | 8912 | 888 | | 54 | 4797 | 8913 | | STLI | 79997 | |
| 0579 | 8913 | 858 | | 70 | 8914 | 3901 | | ADD | 19771 | -0£X |
| 0580 | 8914 | 358 | ō | 99 | 9800 | 0000 | | CON | 99980 | 00000 |
| 0581 | 8902 | 898 | | 60 | BJAC | 8915 | &OEX | STA | LINEO | 00000 |
| 0582 | 8915 | 888 | | 05 | 8916 | 8917 | 4067 | LDX | 2F | |
| 0583 | 8917 | 888 | | 30 | 8918 | 8919 | | LDL | • | TSUB# |
| 0584 | 8918 | 888 | | C6 | 4800 | 8916 | | TBL | 70000 | 2F |
| 0585 | 8916 | 888 | | H2 | 0500 | 8901 | 2 | TWR | OTAP1 | -OEX |
| 0586 | 8920 | 888 | | | 61F8 | 3921 | UNDG# | STX | EXITI | OM 14 |
| 0587 | 8921 | 888 | | | OCOA | 8922 | | LDX | RA | |
| 0588 | 8922 | 898 | | | 8923 | 8924 | | | 33333 | 33333 |
| 0589 | 8924 | 888 | | | 8924 | 8925 | | MTX | | 30303 |
| 0590 | 8925 | 888 | | | 000C | 3926 | | ERS | RX | |
| 0591 | 8926 | 888 | | | 8927 | 3928 | | ERS# | 44444 | 44444 |
| 0592 | 8928 | 888 | | 70 | 8929 | 8930 | | | 44444 | 44444 |
| 0593 | 8930 | 85B | | 77 | 8930 | 8931 | | ATL | 4447 | ~ ~ ~ ~ ~ |
| 0594 | 8931 | 355 | | 20 | 8932 | 8933 | | | 88888 | 88888 |
| 0595 | 8933 | | | 35 | 0000 | 8934 | | ERS | RX | 20044 |
| 0596 | 8934 | 888 | | | OCCA | 8935 | | LDX | RA RA | |
| 0597 | 8935 | 888 | | | 8936 | 8937 | | | 11111 | 11111 |
| 0598 | 8937 | 898 | | | 0008 | 31F8 | | ERS | RL | EXITI |
| | 4-51 | | • | | 4440 | WAT.U | | SAS | 1/6 | 2711 |

A3. CHECK BAD TIMING.

IF D COMPARED TO OPTIM INDICATES A WAIT OF

48 OR 49 ON HSB OR OF 198 OR 199 ON REST OF

DRUM. THE ERROR FLAG - IS PUT ON THE LISTING.

CODING DETAILS!

INPUT IS THE ASSIGNED ADDRESS IN RA AND THE

EXIT IN RL. OUTPUT IN RA IS SOME LOCATION

ON THE APPROPRIATE DRUM LEVEL.

- O. OUTPUT SUBROUTINE.
 THIS ROUTINE IS USED TO TRANSMIT AN ASSEMBLED INSTRUCTION TO THE OUTPUT TAPE.
- O1. TRANSFER
 THE LOCATION IS IN THE FORM RRROSOMAMA WHERE
 RRR ARE RELOCATION DIGITS COPIED FROM THE
 CARD. S IS THE ASSEMBLED SIGN. AND AMAM IS
 THE ASSEMBLED LOCATION. MOVE THE LOCATION
 AND THE ASSEMBLED INSTRUCTION INTO THE
 OUTPUT BUFFER.
- 02. BUFFER FULL
 NO! IF THE BUFFER DOES NOT HAVE 50 INSTRUCTIONS:
 MEXIT.
- YES:
 03. WRITE TAPE
 WRITE THE BUFFER OUT ON THE OUTPUT TAPE AND
 CLEAR THE BUFFER AGAIN. #EXIT.
- G THIS IS AN EDITING SUBROUTINE WHICH TAKES
 G A TEN DIGIT WORD IN RA AND PRODUCES IN
- G COMPUTER CODE THE CONVENTIONAL NOTATION FOR UNDIGITS: ABCFGH. THE ZONE WORD IS PUT INTO
- G RA. NUMERIC IN RX AT EXIT.

#EXIT.

| - | | _ | | | | | | | | | |
|--------------|--------------|-------|-----------|------|--------------|-------|------------|---|-------|------|---|
| 0599 | | | | | | | | | | | |
| 0600 | 4200 | 888 0 | 26 | 4203 | #20T | | ннн | H | | | |
| - 0601 | 4201 | 858 0 | | 4203 | 4203 | START | CLA 1F | | | E. | EDIT INPUT CARD. |
| 0602 | 4203 | 88B 0 | | BOFG | 4203 4207 | STRT | CLA 1F | | | | |
| 0603 | 4207 | 888 0 | | BOFC | 4211 | 1 | STA R | | | | THIS IS WHERE THE PROCESSING OF EACH CARD |
| 0604 | 4211 | 888 0 | | 86FB | 4215 | | STA SIGN | | | | STARTS. THE PURPOSE IS TO TAKE THE INFOR- |
| 0605 | 4215 | 888 0 | | 8001 | 4220 | | STA ERROR | | | | |
| 0606 | 4220 | 888 0 | | 000A | 4224 | | LDA1 BOO1 | • | | | MATION FROM THE INPUT TAPE AND TRANSFER IT |
| 0607 | 4224 | 888 0 | | BIFG | 4029 | | LDX RA | | | | TO THE PRINTER AREA READY TO BE PRINTED AND |
| 0608 | 4029 | 888 0 | | 4231 | 4233 | | SUB LINE | | 60001 | | ALSO EDIT IT INTO A FORM MORE DIGESTIBLE FOR |
| 0609 | 4233 | 858 0 | | 4036 | 4236 | | LDL# 00000 | | 00001 | | ASSEMBLY PROCESSING. |
| 0610 | 4236 | 888 0 | | 1111 | 4036 | | TEQ 1F | | | | THE CARDS ARE REPRESENTED AS 20 WORDS ON |
| 0611 | 4036 | 888 0 | | BIFG | 4040 | 1 | HLT 1111 | 1 | 1F | | TAPE. A ZONE WORD IMMEDIATELY PRECEDING ITS |
| 0612 | | | ••• | | 4040 | • | STX LINE | | | | CORRESPONDING NUMERIC. |
| 0613 | | | | | | | | | | X | 0.1 LINE NUMBER |
| 0614 | | | | | | | | | | X | 2.3 A AR AH AS 1111123330 |
| 0615 | | | | | | | | | | X | 4.5 M MR MH AS 1111123330 |
| 0616 | | | | | | | | | | X | 6.7 C CR CH AS 1111123330 |
| 0617 | | | , | | | | | | | X | 8.9 OP IR AS 1112000000 |
| 0618 | 4040 | 888 0 | 29 | 8003 | 4045 | | LDA1 BOO3 | | | X. | 10-19 REMARKS AS 0111111 |
| 0619 | 4045 | 888 0 | | 8009 | 4400 | | LDX1 8009 | | | | CHECK LINE NO. |
| 0620 | 4400 | 888 0 | | 0500 | 4208 | | SHR 0500 | | | BAU | HIF THE LINE NUMBER IS NOT EXACTLY 1 HIGHER |
| 0621 | 4208 | 888 0 | | 4210 | 4212 | | SUF# 88888 | | 00000 | | THAN THE PRECEDING. STOP THE MACHINE AND |
| 0622 | 4212 | 888 0 | | 0334 | 4436 | | STA 0334 | | 00000 | OK I | THEN RETURN TO#E1. |
| 0623 | 4436 | 888 0 | | 0000 | 4240 | | LDA RX | | | | |
| 0624 | 4240 | 88B 0 | | 4042 | 4044 | | SUF# 0000B | | 0000ള | 24. | TRANSFER |
| 0625 | 4044 | 888 0 | 60 | 0218 | 4420 | | STA 0218 | | 00000 | | MOVE THE LEFT HALF OF THE CARD TO THE PRINTER |
| 0626 | 4420 | 888 0 | 29 | 8002 | 4225 | | LDA1 8002 | | | | AREA EDITING IT SLIGHTLY FOR READABILITY. |
| 0627 | 4225 | 88B 0 | 09 | 8008 | 4230 | | LDX1 8008 | | | | |
| 0628 | 4230 | 888 0 | | 0500 | 4038 | | SHR 0500 | | | | |
| 0629 | 4038 | 888 0 | | 0339 | 4041 | | STA 0339 | | | | |
| 0630 | 4041 | 888 0 | | 0223 | 4425 | | STX 0223 | | | | |
| 0631 | 4425 | 888 0 | 29 | 8007 | 4430 | | LDA1 BOO7 | | | | |
| 0632 | 4430 | 886 | | 4232 | 4234 | | BUF# 00000 | | 80000 | | |
| 0633 | 4234 | 888 0 | | 8006 | 4039 | | LDX1 8006 | | | | |
| 0634 | 4039 | 888 0 | | 0241 | 4043 | | STA 0241 | | | | |
| 0635 | 4043 | 898 0 | - | 0246 | 4048 | | STX 0246 | | | | |
| 0636 | 4048 | 888 0 | | B005 | 4403 | | LDA1 8005 | | | | |
| 0637 | 4403 | 898 0 | | 4205 | 4407 | | BUF# 00000 | | 0000g | | |
| 0638 0630 | 4407 | 888 0 | | B004 | 4412 | | LDX1 8004 | | | | |
| 0639 | 4412 | 888 0 | | 0303 | 4405 | | STA 0303 | | | | |
| 0640 | 4405 | 888 0 | 65 | 0308 | 4410 | | STX 0308 | | | | |
| 0641 | *** | | | | | | HHH | С | | | |
| 0642 | 4410 | 88B 1 | | 0000 | 8598 | | LIR2 0000 | - | -ST | E3. | SEPARATE OFF R. H. |
| 0643 0644 | 8938 | 888 0 | | 8003 | 8940 | -ST | LDA1 8003 | | | | EDIT THE A-AR-AH-M-MR-MH-C-CR-CH. CHANGING |
| 0645 | 8940 | 888 0 | | 8941 | 8941 | | CLX | | | | THE SYMBOLIC PORTION TO A SINGLE WORD WITH |
| 0646 | 8941 | 888 0 | | 0500 | 8942 | | SHR 0500 | | | | THE ZONES AT THE LEFT: ZZZZZNNNNI |
| 0647 | 8942 8943 | 388 1 | | 8699 | 8943 | | STA2 30000 | | | | ACCUMULATE THE R DIGITS. AND PUT THE |
| 0648 | 8944 | 888 0 | | BOFG | 3944 | | LDA R | | | | H-FIELD INTO THE FORM OUZZZOONNN. |
| 4040 | 0744 | 856 0 | 34 | 0900 | 8945 | | SHR 0900 | | | | · · · · · · · · · · · · · · · · · · · |
| | | | | | | | | | | | |

| - | | - | | | | | | | | |
|------|---------|----------------------|------|--------------|-----|--------------|---------------|-------|-------|---|
| 064 | 49 8945 | 888 0 65 | BOFG | 8946 | | STX | R | | | |
| 06: | | 888 Q 06 | | 8947 | | CLX | ** | | | |
| 06 | | 388 0 32 | | 8948 | | SHR | 0700 | | | |
| 06 | | 88B 1 60 | | 8949 | | STAZ | | | | |
| 06 | | 888 0 29 | | 8950 | | LDAI | | | | |
| 06 | | | | 3952 | | | HHHHH | 00000 | | |
| 063 | | - | | | | | 30001 | 00000 | | |
| 063 | | | | 8953 | | ラリベム | 30001 | | | |
| 06: | | | | 8954 | | | | | | |
| 063 | | 85B 1 60 85B 0 29 | | 8955 | | STAZ | | | | |
| - 06 | | | | 8956 | | LDA1 | | | | |
| 066 | | | | 8957 | | | 0400 00HHH | 00000 | | 4 |
| 066 | | 88B 0 35 | | 8959 8960 | | BUF2 | | 00000 | | |
| 066 | | | | | | | | | | |
| 05 | | | | 8961 | | STAZ | | | | |
| 06 | | 888 0 0G 888 1 07 | | 8962 8963 | | IIR1 IIR2 | | | | |
| 066 | _ | | | | | | 0004 | -51 | | |
| 066 | | | | 8938 0000 | | ADD | 99999 | 40000 | | |
| 066 | | 808 () 77 | 7774 | 0000 | | HHH | H | 40000 | | |
| 066 | | 888 0 29 | 8004 | 4244 | &ST | LDA1 | | | Eu. | MOVE COMMENTS |
| 066 | | 98B 0 60 | | 4248 | 431 | STA | R0000 | | 240 | MOVE THE REMARKS FIELD INTO REGION R. |
| 067 | | 858 0 29 | | 4603 | | LDA1 | | | | HOAC LIRE HELMING LEMMA ALLA HERROLL HA |
| 067 | | 358 0 20 | | 4607 | | SUF# | | 00000 | | |
| 067 | | 85B 0 60 | | 4411 | | STA | R0001 | 0000 | | |
| 067 | | BBB 0 29 | | 4016 | | LDAI | | | | |
| 067 | | 38B 0 60 | | 4620 | | STA | R0002 | | | |
| 067 | | 398 0 29 | | 4625 | | LDAI | | | | |
| 067 | | 898 0 60 | | 4229 | | STA | R0003 | | | |
| 067 | | 858 0 29 | | 4434 | | LDAI | | | | |
| 067 | | 39B 0 60 | | 4238 | | STA | R0004 | | | |
| 067 | | 39B 0 29 | | 4243 | | LDAI | | | | |
| 068 | | 888 0 60 | | 4047 | | STA | R0005 | | | |
| 068 | | 888 0 29 | | 4202 | | LDAI | | | | |
| 066 | | 388 0 60 | | 4206 | | STA | R0006 | | | |
| 068 | | 888 0 29 | | 4611 | | LDAI | | | | |
| 068 | | 888 0 60 | | 4415 | | STA | R0007 | | | |
| 068 | | | | 4070 | | LDAI | | | | , |
| 066 | | 888 0 60 | | 4424 | | STA | R0008 | | | |
| 068 | • " | 888 0 29 | | 4429 | | | 8013 | | | |
| 068 | | 888 0 60 | 8678 | 4433 | | STA | R0009 | | | |
| 068 | | | | 4037 | | LDA | 30002 | | | |
| 069 | | 858 0 37 | | 4245 | | SHL | 0500 | | es. | CONSTRUCT CONSTANTS |
| 069 | | 888 0 20 | | 4049 | | BUF | 30004 | | (L) • | PUT TOGETHER THE M AND C FIELDS INTO |
| 069 | | 888 0 60 | | 4053 | | | MCN | | | POSITIVE CONSTANTS MC.MCZ.AND MCN AS THE |
| 069 | | | | 4057 | | STA | 30005 | | | CON NUM ZON CONTROL OPS ARE SUPPOSED TO DO. |
| 069 | | | | 4610 | | CLX | 30000 | | | COM MUM SOM COMINUE OF SAKE SOFFUSED TO DO |
| 069 | | 988 0 32 | | 4018 | | SHR | 0500 | | | |
| 069 | | | | 4222 | | BUF | 30003 | | | |
| 069 | | | | 4026 | | STA | MCZ | | | |
| 069 | | | | 4630 | | | 11111 | 11111 | | |
| | 7080 | Y 22 | 7040 | 7000 | • | #11.0 L | ***** | •••• | | |
| | | | | | | | | | | |

0700

0701

0702

0703

0704

4630

4235

4440

4444

4448

4253

888 0 70

888 0 70

888 0 60

898 0 29

888 0 06

0 20

888

COOA

AODO

B2FG

B4FG

8003

4406

4235

4440

4444

4448

4253

4406

ADD

ADD

BUF

STA

LDA1

CLX

RA

RA

MCN

8003

E6. EDIT OF CODE.

MC

| - | | | | - | | | | | | | |
|---|------|-------|-----|---|-----|--------------|------|--------|------|------------------|---------|
| | 0749 | 4606 | 886 | Q | 35 | 4408 | 4260 | | FRS# | ннннн | H0000 |
| | 0750 | 4260 | 888 | O | 20 | 4612 | 4214 | | BUF | 3 44 14 14 14 14 | SF |
| | 0751 | 4612 | 886 | ٥ | 00 | 0000 | 4027 | | JMP | 0000 | 18 |
| | 0752 | 4214 | 888 | | | 89FG | BOFH | 8 | STA | LTAPE | TEX1 |
| | 0753 | 4228 | 888 | ٥ | | BSFG | 4632 | 6 | LDL | OP | 16,74 |
| | 0754 | 4632 | 888 | | | 4634 | 4636 | • | LDAN | | 88483 |
| | 0755 | 4636 | 858 | - | 82 | 4239 | 4439 | | TEQ | ONN | 88658 |
| | 0756 | 4056 | 888 | | | 0006 | 4409 | ONSW | LIRJ | | SWICH |
| | 0757 | 4409 | 888 | - | | 4061 | 4413 | O; (OH | LDX | | |
| | 0758 | 4413 | 888 | _ | 25 | 4615 | 8712 | | | 1F | EDALLA |
| | 0759 | 4615 | 888 | | | 4219 | 8736 | | LDA | | SRCH* |
| | 0760 | 4219 | 888 | | | 4623 | 4675 | | | 67220 | ERR1# |
| | 0761 | 4675 | 888 | - | | 2000 | 4061 | | | | 00000 |
| | 0762 | 4061 | 888 | | _ | 4613 | 4065 | 1 | | ETAB | 1F |
| | 0763 | 4065 | 888 | | | 4418 | QQQA | • | | CCCCC | CCCCC |
| | 0764 | 4418 | 888 | | | 85FG | 4072 | | TGR | A. | RA |
| | 0765 | 4072 | 898 | _ | | 4074 | 4226 | | STA | OP | 88064 |
| | 0766 | | 949 | • | , | 4014 | 7220 | | LDL | PROCH | PROCA |
| | 0767 | 4226 | 888 | 1 | 08 | 0000 | 4079 | PROCA | HHH | 4 H | |
| | 0768 | 4079 | 888 | _ | | 82FH | 4283 | PROCE | LIRJ | 0000 | |
| | 0769 | 4283 | 888 | | 25 | 8706 | 4237 | | STL | AEX | |
| | 0770 | 4237 | 888 | | -30 | 4639 | 4241 | | LDA | A | |
| | 0771 | 4241 | 658 | Q | 82 | 4644 | 4094 | | LDL# | - | 88888 |
| | 0772 | 4094 | 888 | 0 | 31 | 4447 | | | TEQ | 1 F | |
| | 0773 | 4447 | 888 | 0 | | | 4447 | | CLL | not a third | |
| | 0774 | 4601 | 888 | 0 | | B4FC | 4601 | | LDA | BLANK | |
| | 0775 | 4204 | 888 | 0 | | 4644 | 4204 | | TEO | 1F | |
| | 0776 | 4644 | 888 | 0 | 05 | 4648 | 8736 | | LDL | 1F | ERR 1 * |
| | 0777 | 4600 | 888 | Ö | 30 | 4602 | 4600 | 1 | LDX | 2 F | |
| | 0778 | 4602 | 888 | 1 | 00 | | 8810 | | LDL | | FIND* |
| - | | 4010 | 888 | i | 02 | 4010 0002 | 4010 | 1.0000 | | L0000 | |
| - | 0780 | 4011 | 358 | i | 02 | 0005 | 4012 | L0000 | LIR2 | 0002 | F0005 |
| | 0781 | 4012 | 888 | ō | 30 | 4014 | 4012 | L0001 | LIR2 | 0002 | L0002 |
| | 0782 | 4013 | 888 | Ö | 25 | | 8736 | L0002 | LDL | L0004 | ERR1* |
| - | 0783 | 4014 | 888 | Ö | 25 | B1FG B1FG | 4217 | L0003 | LDA | LINE | 1F |
| - | 0784 | 4015 | 888 | | 25 | | 4217 | L0004 | LDA | LINE | 1F |
| | 0785 | 4217 | 888 | | 30 | 81FG 4419 | 4217 | L0005 | LDA | LINE | 1F |
| | 0786 | 4419 | 888 | | | . • . | 8723 | 1 | LDL | | FARB* |
| | 0787 | 4648 | 888 | | 60 | 4648 | 8861 | • | LDL | 2F | DEFN* |
| | 0788 | 4404 | 858 | | | 85FC 86FC | 4404 | 2 | STA | ALOC | |
| | 0789 | 4608 | 888 | | | 4261 | 4608 | | LDL | MLOC | |
| | 0790 | 4461 | 888 | | | 87FC | 4461 | | TEO | 3F | |
| | 0791 | 4265 | 888 | | | 4618 | 4265 | | LDL | CLOC | |
| | 0792 | 4618 | 888 | | 25 | | 4068 | A | TEO | 4F | 2F |
| | 0793 | 4261 | 888 | | 30 | BSFH | 4272 | 4 | LDA | CLEV | 1F |
| | 0794 | 4465 | 388 | | | B7FC | 4465 | 3 | LDL | CLOC | |
| | 0795 | 4417 | 898 | | | 4417 | 4619 | | LDA | | 8F |
| | 0796 | 4619 | 388 | | | 0000 | 0000 | • | | 00000 | 00000 |
| | 0797 | 4274 | 898 | | 82 | 0008 | 4274 | 8 | ADD | RL | |
| | 0798 | 4227 | | | | 4227 | 4618 | | TEQ | | 4B |
| | -170 | TEG / | 886 | U | 43 | 84FH | 4272 | | LDA | MLEV | 1F |

E9. OP SRCH*.

ON: IF OP IS 'ON' GO TO#C6.

OFFIIF MASTER SWITCH IS OFF GO TO#C7.

ELSE SEARCH FOR OP-CODE IN THE SYMBOL TABLE.

CONT IF IT IS A CONTROL OP. GO TO#C1.

SYM:IF IT IS A MACHINE SYMBOLIC OP. GO TO THE

MAIN PROCESSING ROUTINEMP1.

BAD: IF IT IS NOT IN THE TABLE: GIVE AN ERROR
INDICATION AND CHANGE OF TO 67. GO TO #P1.

- L. PROCESS A ADDRESS.
 THIS ROUTINE IS USED FOR INSTRUCTIONS AND ALSO FOR CONTROL OPS CON NUM . AND ZON.
- LI. CHECK BLANK A

 IF A IS NOT BLANK BUT THE PRECEDING INSTRUCTION HAD A BLANK ADDRESS. GIVE AN ERROR INDICATION.
- L2. FIND* A.

 DEF:FIND A (ROUTINE Q). IF IT IS ALREADY DEFINED.

 GO TOML4.

 UND:
- L3. FAR8+.DEFN+.

 A IS AN UNDEFINED ADDRESS. IF IT IS REGIONAL.

 LOCAL FORWARD. OR BLANK THIS IS AN ERROR

 CONDITION AND A NEW LOCATION IS ASSEMBLED.

 OTHERWISE USE THE LINE NUMBER AS RANDOM DRUM

 LEVEL AND GO THRU FARB+ (ROUTINE F) AND

 DEFN+ (ROUTINE D).
- L4. ADJUST A LEVEL.

 IF THE NEW A ADDRESS MATCHES THE LAST M OR C ADDRESS. USE THEIR LEVEL. EXCEPT ON M ADDRESS MATCH WHERE THE C ADDRESS HAD UNDIGITS. IN THE LATTER CASE THE PREVIOUS C LEVEL IS USED. OTHERWISE USE THE A ADDRESS AS THE DRUM LEVEL

| 0799 | 4272 | 888 0 60 | 83FH | 4426 | 1 | STA | ALEV | | • | |
|--------------|--------------|----------------------|--------------|--------------|----------------|------------|-------------|--------|-------------|--|
| 0800 | 4426 | 888 0 31 | 4279 | 4279 | | CLL | | | L5. | ZERO TO BLANK. |
| 0801 | 4279 | 88B 0 50 | 84FC | 82FH | | STL | BLANK | AEX | | THE LOCATION 'BLANK' IS SET TO ZERO SINCE AT |
| 0802 | | | | | | | | | X | THIS POINT BLANK ADDRESSES ARE UNDEFINED. |
| 0803 | | | | | | | | | X | #EXIT. |
| 0804 | 4068 | 888 0 25 | 4470 | 4472 | 2 | LDA | | 8F | | |
| 0805 | 4470 | 888 1 00 | 0000 | 0000 | | CONI | 00000 | 00000 | | |
| 0806 | 4472 | 888 0 70 | BSFC | 4272 | 8 . | ADD | ALOC | 18 | | |
| 0807 | 4074 | 88B 0 25 | Befg | 4628 | PROCM | LDA | IR | | P. | PROCESSING OF INSTRUCTIONS |
| 0808 | 4628 | 888 0 30 | 4080 | 4082 | | | 00000 | 00800 | Pl. | PROCESS A |
| 0809 | 4082 | 898 0 82 | 4085 | 4285 | | TEQ | 1F | | | EXECUTE THE L ROUTINE. |
| 0810 | 4285 | 888 0 30 | 4437 | 4089 | | LDL# | 10000 | 00H00 | P2. | CALCULATE M OPTIM |
| 0811 | 4089 | 858 0 82 | 4085 | 4642 | | TEO | 1F | | | IF THE IR FIELD IS NON BLANK AND NOT A |
| 0812 | 4642 | 888 0 25 | BJFH | 4046 | | LDA | ALEV | | | LITERAL. ADD 1 TO A LEVEL FOR INDEX REGISTER |
| 0813 | 4046 | 858 0 70 | 4098 | 4051 | | ADD# | 00000 | 00001 | | MODIFICATION TIME. THEN ADD THE APPROPRIATE |
| 0814 | 4051 | 888 0 60 | 83FH | 4085 | | STA | ALEV | 1F | | AMOUNT TO GET THE OPTIMUM M ADDRESS LEVEL. |
| 0815 | 4085 | 898 0 25 | 85FG | 4289 | 1 | LDA | OP | | | AS DETERMINED BY THE OPERATION CODE. |
| 0816 | 4289 | 888 0 32 | 0200 | 4294 | | SHR | 0200 | | | PUT THIS IN *OPTIM*. |
| 0817 | 4294 | 888 0 35 | 4246 | 4298 | | ERS# | 00000 | GOOHH | | |
| 0818 | 4298 | 88B 0 70 | 83FH | 4103 | | ADD | ALEV | | | |
| 0819 | 4103 | 888 0 60 | 89FH | 4457 | | STA | OPTIM | | | |
| 0820 | 4457 | 888 1 08 | 0002 | 4460 | | LIRJ | 0002 | | | |
| 0821 0822 | 4460 | 888 0 25 | B6FG | 4414 | | LDA | IR | 00:100 | ~~ | r represent |
| 0823 | 4414 | 888 0 30 | 4416 | 4268 | | LDL# | 10000 | 00H00 | | LITERAL |
| | 4268 | 888 0 82 | 4421 | 4621 | | TEQ | 5F | | YES | FIF THE IR FIELD CONTAINS A NUMBER SIGN GO TO |
| 0824 | 4621 | 888 0 37 | 0200 | 4626 | | SHL | 0200 | | | #P5. |
| 0825 0826 | 4626 4479 | 888 0 31 888 0 06 | 4479 4282 | 4479 | | CLL | | | NO s | |
| 0827 | 4282 | 888 0 70 | 4084 | 4282 000A | | CLX | 30 | #A | a it | Etalog INDEXING |
| 0828 | 4084 | 888 0 25 | 4000 | 4052 | 3 | ADD LDA | 3F 90000 | 4F | F44 | FIGURE INDEXING ADJUST BIT 4 OF THE OPERATION CODE AND |
| 0829 | 4000 | 358 0 00 | 0000 | 0000 | ã0 0 00 | CON | 00000 | 00000 | | THE SIGN OF THE RESULT TO GIVE THE INDEX |
| 0830 | 4001 | 858 0 40 | 0000 | 0000 | 90001 | CON | 40000 | 00000 | | REGISTER MODIFICATION DESIRED. GO TOMP6. |
| 0831 | 4002 | 888 0 00 | 0000 | 0001 | 00002 | CON | 00000 | 00001 | | MEGIZIEN MODIFICATION DESIRED! GO JONEO! |
| 0832 | 4003 | 888 0 40 | 0000 | 0001 | 90003 | CON | 40000 | 00001 | | |
| 0833 | 4004 | 898 0 00 | 0000 | 0002 | 00004 | CON | 00000 | 00002 | | |
| 0834 | 4005 | 888 0 00 | 0000 | 0003 | 00005 | CON | 00000 | 00003 | | |
| 0835 | 4006 | 888 0 00 | 0000 | 0005 | 90006 | CON | 00000 | 00005 | | |
| 0836 | 4007 | 88B 0 00 | 0000 | 0006 | 90007 | CON | 00000 | 00006 | | |
| 0837 | 4008 | 888 0 00 | 0000 | 0007 | 00008 | CON | 00000 | 00007 | | |
| 0838 | 4009 | 888 0 00 | 0000 | 8000 | 90009 | CON | 00000 | 00008 | | |
| 0839 | 4052 | 888 0 60 | B9FC | 4256 | 4 | STA | SIGN | •••• | | |
| 0840 | 4256 | 888 0 32 | 0100 | 4660 | | SHR | 0100 | | | |
| 0841 | 4660 | 858 0 20 | 85FG | 4614 | | BUF | OP | | | |
| 0842 | 4614 | 888 Q 60 | BSFG | 4468 | | STA | OP | PRCMI | | |
| 0843 | 4421 | 888 0 25 | BOFH | 4125 | 5 | LDA | OPTIM | - | P5. | CREATE CONSTANT |
| 0844 | 4125 | 888 0 30 | 4427 | 8723 | | LDL | | FARB* | - • | GO THRU FARB+ AND AUST+ (ROUTINES F AND A) |
| 0845 | 4427 | 888 0 60 | 86FC | 4483 | | STA | MLOC | • | | TO DETERMINE AN ADDRESS AND DRUM LEVEL FOR |
| 0846 | 4483 | 858 0 30 | 4485 | 3871 | | LOL | | *TZLA | | THE LITERAL CONSTANT. ASSEMBLE THE POSITIVE |
| 0847 | 4485 | 888 0 60 | 84FH | 4441 | | STA | MLEV | | | CONSTANT INTO THIS LOCATION. (ROUTINE O) |
| 0848 | 4441 | 858 0 25 | 86FC | 4645 | | LDA | MLOC | | | TRANSFERRING THE MR DIGIT INTO AN AR DIGIT |
| | | | | | | | | | | |

| 0849 | 4645 | 888 | 0 | 32 | 0800 | 4456 | | SHR | 0800 | |
|--------------|--------------|------------|---|----------|------|------|-------|------|--------|----------|
| 0850 | 4456 | 388 | ā | 25 | BOFG | 4110 | | LDA | R | |
| 0851 | 4110 | 888 | ā | 35 | 4062 | 4064 | | ERS# | 00000 | 000H0 |
| 0852 | 4064 | 898 | ŏ | 32 | 0200 | 4069 | | SHR | 0200 | 0000 |
| 0853 | 4069 | 888 | ŏ | 25 | 84FG | 4073 | | LDA | MC | |
| 0854 | 4073 | 398 | ā | 30 | 4325 | 8900 | | LDL | nc nc | OTPT* |
| 0855 | 4325 | 888 | ٥ | 25 | 4679 | 4431 | | LDA# | 00000 | |
| 0856 | 4431 | 398 | Ö | 60 | 8710 | 4685 | | _ | 00000 | 88888 |
| 0857 | 4468 | 888 | 0 | 05 | 4670 | | PRCMI | STA | C | PROCC |
| 0858 | 4672 | 888 | a | 30 | 4474 | 4672 | LKONI | LDX | 2F | # Thin a |
| 0859 | 4474 | 888 | - | | 4129 | 8810 | | LDL | | FIND* |
| 0860 | 4129 | 888 | 1 | 31 | | 4129 | | CLL | W0000 | |
| 0861 | 4022 | | _ | | 4020 | 4020 | 40000 | JMP2 | | |
| 0862 | | 888 | 0 | 25 | aspg | 4076 | M0002 | LDA | OP | ~~~~ |
| 0863 | 4076 4280 | 888 | Ö | 35 | 4078 | 4280 | | ERS# | 00020 | 00000 |
| 0864 | 4683 | 856 886 | 0 | 82 | 4021 | 4683 | | TEQ | M0001 | |
| 0865 | 4020 | 888 | 0 | 25 30 | BSFC | 4670 | M0000 | LDA | ALOC | 2F |
| 0866 | 4023 | 888 | 0 | 30 | 4122 | 8736 | | LDL | 1F | ERR1* |
| 0867 | 4122 | 888 | _ | | 4122 | 8736 | M0003 | LDL | 1F | ERR1+ |
| 0868 | 4025 | | 0 | 26 | 4670 | 4670 | 1 | CLA | 2F | . = |
| 0869 | 4024 | 888 | - | 25 | 89FH | 4329 | M0005 | LDA | OPTIM | 1F |
| | | 888 | 0 | 25 | B9FH | 4329 | M0004 | LDA | OPTIM | 1F |
| 0870 | 4021 | 888 | 0 | 25 | 89FH | 4329 | M0001 | LDA | OPTIM | 1F |
| 0871 | 4329 | 898 | | 30 | 4631 | 8723 | 1 | LDL | | FARB* |
| 0872 | 4631 | 888 | 0 | 30 | 4670 | 8861 | _ | LDL | 2F | DEFN* |
| 0873 | 4670 | 898 | 0 | 60 | 86FC | 4276 | 2 | STA | MLOC | |
| 0874 | 4276 | 888 | 0 | 30 | 4278 | 3871 | | LDL | | AJST* |
| 0875 | 4278 | 858 | 0 | 60 | BAFH | 4685 | | STA | MLEV | PROCC |
| 0876 0877 | 4685 | 858 | 0 | 25 | 85FG | 4489 | PROCC | LDA | OP | |
| 0878 | 4489 | 888 | 0 | 35 | 4641 | 4643 | | ERS# | 00H00 | 00000 |
| 0879 | 4643 | 855 | Õ | 70 | 4095 | 4498 | | ADD | AATO 5 | -C1 |
| | 4095 | 888 | 0 | 99 | 7000 | 0000 | | CON | 99700 | 00000 |
| 0880 0881 | 4499 | 888 | 0 | 25 | BOFC | 4303 | #C1 | LDA | MLOC | |
| | 4303 | 888 | 0 | 30 | 4255 | 4657 | | LDL# | 00000 | 00F00 |
| 0882 | 4657 | 888 | 0 | 82 | 4310 | 4510 | | TEQ | | 1F |
| 0883 | 4310 | 388 | Q | 25 | 4262 | 4510 | | LDA | | 1F |
| 0884 | 4262 | 888 | 0 | 00 | 0000 | 1000 | _ | CON | 00000 | 01000 |
| 0885 | 4510 | 888 | 0 | 06 | 4063 | 4063 | 1 | CLX | | |
| 0886 | 4063 | 888 | | 32 | 0200 | 4668 | | SHR | 0200 | |
| 0887 | 4668 | 888 | | | 85FG | 4273 | | ADD | OP | |
| 0888 | 4273 | 888 | Ð | 90 | asfg | 4477 | | STA | OP | &C2 |
| 0889 | | ~ | _ | | | | | | | |
| 0890 | 4498 | 888 | | | 4251 | 4503 | -C1 | LDL# | 99800 | 00000 |
| 0891 | 4503 | 898 | | | 4656 | 4106 | | TEQ | | 3F |
| 0892 | 4656 | 888 | _ | | 85FG | 4710 | | LDA | OP | |
| 0893 | 4710 | 888 | | | 4462 | 4264 | | ERS | | 2F |
| 0894 | 4462 | 898 | | | 0000 | НННН | _ | CON | 00000 | HHHHO |
| 0895 | 4106 | 898 | | | 4058 | 4476 | 3 | ADD | | -C2 |
| 0896 | 4058 | 888 | | | 1000 | 0000 | | CON | 00100 | 00000 |
| 0897 | 4477 | 888 | | 30 | BJFH | 4081 | &C2 | LDL | ALEV | 3F |
| 0898 | 4476 | 888 | 0 | 30 | 84FH | 4081 | -c2 | LDL | MLEV | 3F |
| | | | | | | | | | | |

FOR THE CONSTANT.
MARK THE C FIELD BLANK AND GO TOMPS.

P6. FIND# M.

DEFIFIND M(ROUTINE Q). IF IT IS ALREADY DEFINED.

GO TOMPS.

UND:

P7. FARS** DEFN*.

M IS AN UNDEFINED ADDRESS. IF IT IS

REGIONAL OR LOCAL PLAIN THIS IS AN ERROR

CONDITION AND ZERD IS ASSEMBLED. IF IT IS

BLANK AND IF THE DP-CODE IS ONE THAT IGNORES

M. * IS ASSEMBLED.

OTHERWISE FARS* AND DEFN* (ROUTINES F.D.) ARE

USED TO DEFINE M ON THE BASIS OF OPTIM AND

P8. ADJUST M LEVEL
THE DRUM LEVEL AT THIS POINT IS NOW
DETERMINED BY SUBROUTINE A.

THE MH-FIELD.

P9. CALCULATE C OPTIM

WE BEGIN TO WORK ON THE C ADDRESS NOW.

THE OP CODE FOUND IN THE SYMBOL TABLE IS IN A

SPECIAL FORMAT OPTSOOMMCC.

HERE OP IS THE TWO DIGIT OPERATION CODE.

S IS 1 FOR IGNORE C: 2 FOR IGNORE M.

MM AND CC ARE INCREMENTS FOR DETERMINING

LATENCY. T IS THE TYPE OF LATENCY RULE

REQUIRED: AS FOLLOWS:

X O: C IS MMCC FIXED LEVEL.

1: C IS MMCC FIXED LEVEL.

2: C IS A+CC

3: SHIFT COMMANDS C IS A+N+CC.

WE NOW CALCULATE OPTIM FOR C. ACCORDING TO THE RULE GIVEN BY T.

| | - | | | | | | |
|--------|---------------|-----------|-------|------|---------------|------------|---|
| 0899 | 4081 888 0 25 | 85FG 4135 | 3 | LDA | OP | | |
| 0900 | | 4637 4689 | • | | 00000 | 000HH | |
| 0901 | | 000B 4264 | | | RL | 2F | |
| 0902 | | 89FH 4118 | 2 | STA | OPTIM | 6 1 | |
| 0903 | | 0004 4071 | _ | LIRJ | | | P10.FIND* C. |
| 0904 | | 4473 4525 | | LDX | | | DEF: FIND C(ROUTINE Q). IF IT IS ALREADY DEFINED. |
| 0905 | | 4627 8810 | | LDL | £r . | FIND* | GO TO#P12. |
| - 0906 | | 4030 4030 | | | C0000 | PANDT | UND1 |
| 0907 | | 4335 8736 | C0003 | | 1F | ERR1# | P11.FARG*.DEFN*. |
| 0908 | | 4335 8736 | 0000 | LDL | 1F | ERRI* | C IS AN UNDEFINED ADDRESS. IF IT IS |
| 0909 | | 4473 4473 | 1 | CLA | 2F | E1417 4 | REGIONAL OR LOCAL PLAIN. THIS IS AN ERROR |
| 0910 | | 85FG 4086 | c0002 | LDA | OP | | CONDITION AND ZERO IS ASSEMBLED. |
| 0911 | | 4088 4640 | 0000 | | 00010 | 00000 | IF IT IS BLANK AND THE OP-CODE IGNORES C. |
| 0912 | | 4093 4093 | | CLL | 9 0040 | •••• | IT IS HADE EQUAL TO M. OTHERWISE FARB# AND |
| 0913 | | 4446 4646 | | TEO | 1 F | | DEFN+ (ROUTINES F+D) ARE ACTIVATED TO DEFINE |
| 0914 | | 86FC 4473 | | LDA | MLOC | 2F | C ON THE BASIS OF OPTIM. |
| 0915 | | 0010 4449 | 1 | IIR | 0010 | . | BLANK ADDRESS HERE MAY BE PUT IN BODA |
| 0916 | | 88AH 4604 | | ADD | FUNNY | | OR BOOF REGION OF CORE. |
| 0917 | | 4306 4258 | | LDL# | 00199 | 00000 | all man limes and a man |
| 0918 | | 4031 4661 | | TGR | C0001 | | |
| 0919 | | B8AH 4665 | | STA | FUNNY | | |
| 0920 | | 000A 4269 | | LDX | RA | | |
| 0921 | 4269 BBB 0 70 | 4271 4724 | | ADD | | -FNNY | |
| 0922 | | 9000 0000 | | CON | 99900 | 00000 | |
| 0923 | 4725 BBB 0 20 | 4077 4529 | &FNNY | BUF | | 1F | |
| 0924 | 4077 88B 0 00 | 800F 0000 | | CON | 00800 | F0000 | |
| 0925 | 4724 BBB 0 07 | BOOA 4277 | -FNNY | IIR | BOOA | | |
| - 0926 | | 000C 4529 | | BUF | RX | 1F | |
| 0927 | 4529 888 0 32 | 0400 4286 | 1 | SHR | 0400 | 3F | |
| 0928 | | 89FH 4139 | C0005 | LDA | OPTIM | 1F | |
| 0929 | | 89FH 4139 | C0004 | LDA | OPTIM | 1F | |
| 0930 | | 89FH 4139 | C0001 | LDA | OPTIM | 1F | • |
| 0931 | | 4286 8723 | 1 | LDL | 3F | FARB* | |
| 0932 | | 4473 3861 | 3 | LDL | 2F | Defn* | |
| 0933 | | 87FC 4729 | 2 | STA | CLOC | | P12.ADJUST C LEVEL |
| 0934 | | 4281 3871 | | LDL | | AJST* | THE DRUM LEVEL AT THIS POINT IS NOW |
| 0935 | | 85FH 4087 | | STA | CLEV | BUILO | DETERMINED BY SUBROUTINE A. |
| 0936 | | 87FC 4091 | BUILD | LDA | | | P13. SYNTHESIZE |
| 0937 | | 0400 4698 | | SHR | 0400 | | THE OP! M AND C ARE NOW PUT TOGETHER |
| 0938 | | 86FC 4252 | | LDA | MLOC | | INTO A TEN-DIGIT INSTRUCTION. |
| 0939 | | 0600 4111 | | SHR | 0600 | | |
| 0940 | | 85FG 4115 | | | OP | | |
| 0941 | | 4617 4469 | | | HH000 | 00000 | |
| 0942 | | 000C 4673 | | | RX | | |
| 0943 | | 4673 4676 | | ATL | | BILDI | |
| 0944 | | B5FC 4480 | BILDI | LDA | ALOC | | P14.ASSEMBLE |
| 0945 | | 4133 4133 | | CLX | | | |
| 0946 | | 0500 4291 | | SHR | 0500 | | USE ROUTINE O TO OUTPUT THE ASSEMBLED |
| 0947 | | B9FC 4295 | | LDA | SIGN | | LINE OF CODE. |
| 0948 | 4295 BBB 0 32 | 0200 4050 | | SHR | 0200 | | |
| | | | | | | | |

| 0949 | 4050 | 888 | O | 25 | BOFG | 4054 | | LDA | R | |
|--------------|---|------------|---|----|--------------|--------------|-------|------|-------|-----------|
| 0950 | 4054 | 388 | O | 32 | 0300 | 4160 | | SHR | 0300 | |
| 0951 | 4160 | 858 | ō | 25 | 0008 | 4464 | | LDA | RL | |
| 0952 | 4464 | 888 | | 30 | 4616 | 8900 | | LDL | | OTPT* |
| 0953 | 4616 | 888 | 0 | 25 | 84FB | 4322 | | LDA | TEMP! | 1F |
| 0954 | 4322 | 888 | 0 | 05 | 4674 | 8920 | 1 | LDX | | UNDG* |
| 0955 | 4674 | 898 | 0 | 65 | 84F8 | 4680 | | STX | TEMPI | |
| 0956 | 4680 | 898 | 0 | 06 | 4333 | 4333 | | CLX | | |
| 0957 | 4333 | 888 | 0 | 32 | 0400 | 4090 | | SHR | 0400 | |
| 0958 | 4090 | 858 | 0 | 37 | 0200 | 4495 | | SHL | 0200 | |
| 0959 | 4495 | 888 | 0 | 32 | 0600 | 4254 | | SHR | 0600 | |
| 0960 | 4254 | 988 | 0 | 65 | 0255 | 4107 | | STX | 0255 | |
| 0961 | 4107 | 888 | 0 | 37 | 0200 | 4662 | | SHL | 0200 | |
| 0962 | 4662 | 858 | 0 | 60 | BJFB | 4066 | | STA | TEMP | |
| 0963 | 4066 | 888 | 0 | 25 | 85F8 | 4120 | | LDA | TEMP2 | |
| 0964 | 4120 | 888 | 0 | 05 | 4522 | 8920 | | LDX | | UNDG* |
| 0965 | 4522 | 888 | 0 | 65 | 85F8 | 4478 | | STX | TEMP2 | |
| 0966 | 4478 | 888 | 0 | 77 | 4478 | 4481 | | ATL | | |
| 0967 | 4481 | 888 | 0 | 35 | 4533 | 4535 | | | HHHHH | H0000 |
| 0968 | 4535 | 888 | 0 | 20 | 83FB | 4339 | | BUF | TEMP | |
| 0969 | 4339 | 858 | 0 | 60 | 0370 | 4722 | | STA | 0370 | |
| 0970 | 4722 | 888 | 0 | 25 | 000B | 4126 | | LDA | RL | |
| 0971 | 4126 | 888 | | 35 | 4678 | 4130 | | ER5# | | OHHHH |
| 0972 | 4130 | 888 | 0 | 37 | 0200 | 4735 | | SHL | 0200 | |
| 0973 | 4735 | 888 | 0 | 60 | 0286 | 4288 | | STA | 0286 | |
| 0974 | 4288 | 888 | 0 | 25 | 95FB | 4092 | | LDA | TEMP2 | |
| 0975 | 4092 | 888 | 0 | 35 | 4494 | 4096 | | | 00000 | OHHHH |
| 0976 | 4096 | 888 | 0 | 37 | 0200 | 4451 | | SHL | 0200 | _ |
| 0977 | 4451 | 856 | 0 | 20 | 4703 | 4455 | | BUF# | | 000B3 |
| 0978 | 4455 | 888 | Q | 60 | 0281 | 4733 | | STA | 0281 | |
| 0979 | 4733 | 888 | 0 | 25 | 85F8 | 4287 | | LDA | TEMP2 | : |
| 0980 0981 | 4287 | 898 | 0 | 35 | 4539 | 4491 | | ERS# | ННННН | H0000 |
| 0982 | 4491 | 888 | 0 | 77 | 4491 | 4694 | | ATL | | |
| 0983 | 4694 4148 | 388 | 0 | 25 | 84F8 | 4148 | | LDA | TEMP! | |
| 0984 | | 388 | 0 | 06 | 4651 | 4651 | | CLX | | |
| 0985 | 4651 4458 | 858 | - | 32 | 0400 | 4458 | | SHR | 0400 | |
| 0986 | 4263 | 888 | | 37 | 0200 | 4263 | | SHL | 0200 | |
| 0987 | 4172 | 388 | | | 0600 | 4172 | | SHR | 0600 | |
| 0988 | 4677 | 888 888 | | | 0200 | 4677 | | SHL | 0200 | |
| 0989 | 4681 | | | 20 | 000B | 4681 | | BUF | RL | m049 a |
| 0990 | 4185 | | Ö | 60 | 0365 | 4185 | | gUF# | 00080 | 80083 |
| 0991 | 4067 | 338 | | | 0000 | 4067 4471 | | STA | 0365 | |
| 0992 | 4471 | | Ö | 20 | 4123 | - | | LDA | RX | 90000 |
| 0993 | 4175 | 886 | - | | | 4175 | | BUF# | 00008 | 80000 |
| 0994 | 0205 | 888 | | 00 | 0250 | 4452 | A204 | STA | 0250 | ALLX |
| 0995 | BJAG | 888 | 0 | 06 | | 0000 | 0205 | CON | 00000 | 00000 |
| 0996 | 4669 | 886 | - | 63 | 4669 4669 | 4669 4372 | PSUDX | CLX | | |
| 0997 | 4372 | 888 | _ | | 0250 | 4652 | | ZAP | 0250 | |
| 0998 | 4652 | 888 | | | 0255 | 4307 | | STX | 0255 | |
| | · + + + + + + + + + + + + + + + + + + + | نها صد صد | • | - | V233 | 7,07 | | 217 | 0233 | |
| | | | | | | | | | | |

P15.EDIT

THE ASSEMBLED INSTRUCTION IS EDITED AND SENT TO THE PRINTER AREA. FOR CONTROL OPERATIONS, HOWEVER, THIS PART IS SET TO BLANKS.

1047

1048

| | 0999 | 4307 | 886 | 0 | 60 | 0281 | 4383 | | STA | 0281 | |
|---|-----------|------|-----|---|----|------|------|------|------|-------|---------|
| | 1000 | 4383 | | Ö | | 0286 | 4488 | | STX | 0286 | |
| | 1001 | 4488 | | | 60 | 0365 | 4267 | | STA | 0365 | |
| | 1002 | 4267 | | | 65 | 0370 | | | | | Al i V |
| | | | | | | | 4452 | | STX | 0370 | ALLX |
| | 1003 | 4452 | 898 | | 31 | 4655 | 4655 | ALLX | CLL | _ | |
| | 1004 | 4655 | 888 | | 25 | 87FH | 4609 | | LDA | FTAG | |
| | 1005 | 4609 | 888 | 0 | 82 | 4112 | 4312 | | TEQ | FIN | FLOW |
| | 1006 | 4112 | 888 | 0 | 25 | 8678 | 4266 | FIN | LDA | R0009 | |
| | 1007 | 4266 | 888 | ۵ | 05 | 8677 | 4320 | | LDX | R0008 | |
| | 1008 | 4320 | | | 60 | 0262 | 4664 | | STA | 0262 | |
| | 1009 | 4664 | | | 65 | 0267 | 4119 | | STX | 0267 | |
| | 1010 | 4119 | | | 25 | 8674 | 4323 | | LDA | R0005 | |
| | | | | | | | | | | | |
| | 1011 | 4323 | | | 05 | 8673 | 4127 | | LDX | R0004 | |
| | 1012 | 4127 | | | 60 | 0294 | 4296 | | STA | 0294 | |
| | 1013 | 4296 | 888 | | 65 | 0299 | 4101 | | STX | 0299 | |
| | 1014 | 4101 | | 0 | 25 | 8670 | 4105 | | LDA | R0001 | |
| | 1015 | 4105 | 898 | 0 | 05 | 8669 | 4059 | | LDX | R0000 | |
| | 1016 | 4059 | 888 | a | 60 | 0325 | 4327 | | STA | 0325 | |
| | 1017 | 4327 | 886 | | | 0330 | 4482 | | STX | 0330 | |
| | 1018 | 4482 | | | 25 | 8676 | 4486 | | LDA | R0007 | |
| | 1019 | 4486 | | | 05 | 8675 | 4290 | | LDX | R0006 | |
| | 1020 | 4290 | | ŏ | 60 | 0378 | 4330 | | STA | 0378 | |
| | 1021 | | | | | | | | | | |
| | | 4330 | | | 65 | 0383 | 4385 | | STX | 0383 | |
| | 1022 | 4385 | | | 25 | 8672 | 4739 | | LDA | R0003 | |
| | 1023 | 4739 | 888 | 0 | 05 | 8671 | 4293 | | LDX | R0002 | |
| | 1024 | 4293 | 888 | 0 | 60 | 0209 | 4311 | | STA | 0209 | |
| | 1025 | 4311 | 888 | 0 | 65 | 0214 | 4466 | | STX | 0214 | |
| | 1026 | 4466 | 888 | ٥ | 25 | 86F8 | 4520 | | LDA | ERROR | |
| | 1027 | 4520 | | Ō | | 4523 | 4523 | | CLX | | |
| | 1028 | 4523 | 888 | | 62 | 4523 | 4527 | | ZUP | | |
| | 1029 | 4527 | 888 | - | 37 | 0400 | | | | 0400 | |
| | | | | | | | 4284 | | SHL | | |
| | 1030 | 4284 | 888 | 0 | 20 | BIFG | 4688 | | BUF | LINE | |
| | 1031 | 4688 | 888 | 0 | 20 | 4490 | 4292 | | SUF# | 00000 | 80000 |
| | 1032 | 4292 | | 0 | 60 | 0200 | 4102 | | STA | 0200 | |
| | 1033 | 4102 | 886 | 0 | 25 | BZAC | 4506 | | LDA | LC | |
| | 1034 | 4506 | 888 | 0 | 70 | 4658 | 4511 | | ADD | | -PR |
| | 1035 | 4658 | 888 | 0 | 99 | 9999 | 9951 | | CON | 99999 | 99951 |
| | 1036 | 4511 | 888 | 0 | 75 | 4114 | 4467 | -PR | SUB# | 99999 | 99950 |
| | 1037 | 4467 | 888 | | | BZAC | 4671 | • | STA | LC | |
| | 1038 | 4671 | | | 11 | 0201 | 4189 | | PRN | 0201 | -PRI |
| | 1039 | 4512 | 888 | | | BZAC | 4666 | &PR | STA | | * * * * |
| | 1040 | - | | | | | | #FIV | | LC | 80 t |
| | | 4666 | | | 11 | 0217 | 4189 | | PRN | 0217 | -PRI |
| | 1041 | 4190 | 888 | | | 3333 | OOOA | &PR1 | HLT | 3333 | RA |
| | 1042 | 4189 | | | 25 | 87FG | 4493 | -PR1 | LDA | TAPEI | |
| | 1043 | 4493 | | | 70 | 4695 | AOOO | | ADD | _ | RA |
| , | 1044 | 4695 | 888 | 0 | OB | 0000 | 4200 | | LIRI | 0000 | START |
| | 1045 | | | | | | | | | | |
| | A 44 55 4 | | | | | | | | | | |

P16.FLOW CHART

IF THE CONTROL OPERATION FLO YES: HAS APPEARED EARLIER. GO TO THE FLOW-CHARTING ROUTINE#X1.

NO:

PI7. PRINT

MOVE THE REMARKS TO THE PRINTER AREA FROM REGION R. TAKE ALL ERROR CONDITIONS THAT HAVE BEEN DETECTED AND PUT THEM ON THE LIST-ING. THERE IS ROOM FOR AT MOST 5 ERRORS. INTERROGATE THE PAGE-LINE COUNTER TO SEE IF A SKIP TO NEXT PAGE IS NECESSARY. FINALLY PRINT THE LINE. AND GET READY FOR THE NEXT LINE. GOING TO#E1.

C. CONTROL OPS.

CI. BRANCH TO OP

G RA CONTAINS A TRANSFER TO CONTROL OP.

G FROM STEP E9.

| 1050 | ÷ | | | | | | | |
|--------------|--------------|----------------------|--------------|--------------|----------|------------|-----------------------|-------|
| 1051 | | | | | | | | |
| 1052 | ı | | | | | | | |
| 1053 | | | | | | | | |
| 1054 | | | | | | | | |
| 1055 | | | | | | | | |
| 1056 | | | | | | | | |
| 1057 | | | | | | | | |
| 1058 | | | | | | | | |
| 1059 | | | | | | | | |
| 1000 | | | | | | | | |
| 1061 | | | | | | | | |
| 1062 | | | | | | | | |
| 1063 | | | | | | | | |
| 1064 | | | | | | | | |
| 1065 | | | | | | | | |
| 1066 | 85AG | 888 Q 25 | 8709 | 4720 | ннн | LDA | MU | |
| 1067 | 4720 | 888 0 60 | BOFH | | utu | STA | MH HTAG | PSUDX |
| 1068 | BOAG | 898 0 25 | 4318 | 83AG 4170 | FLO | LDA# | HHHHH | HHHHH |
| 1069 | 4170 | 888 0 67 | 1212 | | FLO | HLT | | חחשחח |
| 1070 | 4712 | 888 0 60 | 87FH | 4712 83ag | | STA | 1212 | PSUDX |
| 1071 | 7/12 | 999 0 90 | 9/FM | DACE | | 314 | FTAG | POUN |
| 1072 | HAIE | 888 0 25 | 9150 | 4672 | MissM | LDA | MAN | . 5 |
| 1073 | HASE | 888 0 25 | 82FG | 4572 | NUM | LDA | MCN | 1F |
| 1074 | 84AH | 88B 0 25 | BJFG | 4572 | ZON | LDA | MCZ | 1F |
| 1075 | | | 8708 | 4572 | ALF | LDA | M | 1F |
| 1076 | 4572 80ah | 888 0 60 888 0 30 | 84FG | HADE | 1 | STA | MC | CON |
| 1077 | | | 4128 | 4530 | CON | LDL | | PSIGN |
| 1078 | 4128 4730 | 888 0 30 | 4730 | 4226 | | LDL | W. | PROCA |
| 1079 | 4530 | 898 0 30 898 0 50 | 84FG | 4676 | Beton | LDL | MC | BILDI |
| 1080 | 4484 | 858 0 25 | BOFB B6FG | 4484 | PSIGN | STL | EXIT | |
| 1081 | 4138 | 888 0 30 | 4690 | 4138 | | LDA | IR | 00.00 |
| 1082 | 4492 | 988 0 82 | 4145 | 4492 4345 | | LDL# | 00000 | 00400 |
| 1083 | 4345 | 858 0 32 | 0200 | 4145 | | TEO SHR | 1F 0200 | 1F |
| 1084 | 4145 | 888 0 60 | 89FC | 30F8 | • | STA | • | EXIT |
| 1085 | BAOB | 888 2 02 | 0000 | 4319 | 1 BLA | LIR4 | SIGN | iF |
| 1086 | BIAG | 888 2 02 | 0003 | | | | | |
| 1087 | 4319 | | | 4319 | SLR | LIR4 | 0003 | 1F |
| 1088 | 4723 | 888 0 25 | 8711 4375 | 4723 | 1 | LDA | CH | AAABa |
| 1089 | 4727 | 888 0 82 | | 4727 | | | 00000 | 00988 |
| 1090 | | | 4180 | 4380 | | TEQ | 1F | |
| 1091 | 4380 | 888 0 35 | 4682 | 4684 | | | 00000 | ОООНН |
| | 4684 | 88B 0 37 | 0400 | 4691 | | SHL | 0400 | 2F |
| 1092 | 4180 | 88B 0 07 | 0001 | 4691 | 1 | IIR | 0001 | 2F |
| 1093 1094 | 4691 | 888 0 77 | 4691 | 4144 | 2 | ATL | m11 a 5 4 | |
| | 4144 | 888 0 20 | 4496 | 4348 | | BUF | BVARI | |
| 1095 | 4348 | 888 0 60 | 4450 | 4302 | | STA | BVAR | |
| 1096 | 4302 | 898 0 25 | 6000 | 4706 | | LDA | RL | |
| 1097 | 4706 | 888 0 06 | 4259 | 4259 | | CLX | - 11 - " " | |
| 1098 | 4259 | 888 0 32 | 0400 | 4116 | | SHR | 0400 | |
| | | | | | | | | |
| | | | | | | | | |

HIF OP IS BLANK. GO TOMPIS. CONIFOR CONINUMIZONIALFI GO TORCZI BLR: FOR BLA.BLR GO TOMC3. CORIFOR COR GO TOMCA. EQUIFOR EQU GO TONCS. HHHIFOR HHH, SET MH INTO HTAG AND GO TOMP15. OFFIFOR OFF GO TO#C6 FLOIFOR FLO. SET FLOWCHARTING TAG ON AND GO TO #PIS ALSO. PATIFOR PATIPRINT THE AVAILABILITY TABLE AND GO TONEL. TYPIFOR TYP: HALT AND INSERT RA IN TYPE OF PROG. X GO TOMP15. ERRITE AN ERROR OCCURS WHILE PROCESSING ONE OF THE ABOVE, NO ADDITIONAL ACTION TAKES PLACE AND WE GO TOMPIS. END: FOR END. GO TO THE ENDING ROUTINE#Z1.

G OPERATOR SHOULD CLEAR A IF FLOWCHARTING
IS NOT DESIRED.
C2. PROCESS A
USE ROUTINE L TO GET THE A ADDRESS.
THEN USE THE IR FIELD TO INDICATE THE
SIGN AND GO TOWPIN TO ASSEMBLE THE INSTRUCT

TION.

C3. UPDATE AVAIL TABLE
CHECK CH-FIELD FOR INCREMENT. IF BLANK.
USE 1. ELSE USE CH MOD 100. FIND* M.
IF UNDEFINED. ERROR. IF C IS BLANK. SET
C EQUAL TO M. ELSE FIND* C. IF UNDEFINED.
ERROR. FIND THE STARTING PLACE IN THE
AVAILABILITY TABLE. AND KEEP RESERVING OR
UNRESERVING ONE LOCATION AT A TIME
UNTIL DONE. GO TORCS.

| 1099 | 4116 | 888 0 75 | 4518 | 4121 | | SUB# 00000 | 00001 |
|------|------|----------|------|-------------|--------------|---------------|--------|
| 1100 | 4121 | 888 0 60 | 84FB | 4575 | | STA TEMP1 | 1F |
| 1101 | 4575 | 88B 0 05 | 4177 | 4179 | • | · | FP2ER |
| | | | | | 1 | LDX 2F | |
| 1102 | 4179 | 888 1 08 | 0002 | 4132 | FP2ER | LIR3 0002 | FPERR |
| 1103 | 4177 | 888 0 60 | 86FC | 4131 | 2 | STA MLOC | |
| 1104 | 4131 | 88B 0 25 | 8710 | 4585 | | LDA C | |
| 1105 | 4585 | 888 0 30 | 4487 | 4389 | | LDL# 00000 | 88888 |
| 1106 | 4389 | 898 0 82 | 4692 | 4142 | | TEQ | 1F |
| | | | | | | | 14 |
| 1107 | 4692 | 888 0 26 | 4545 | 4545 | | CLA 3F | |
| 1108 | 4142 | 888 1 08 | 0004 | 4745 | 1 | LIR3 0004 | |
| 1109 | 4745 | 888 0 05 | 4647 | 4132 | | LDX 2F | FPERR |
| 1110 | 4132 | 888 0 30 | 4134 | 8810 | FPERR | LDL PERR | FIND* |
| 1111 | 4647 | 888 0 75 | B6FC | 4545 | 2 | SUB MLOC | 3F |
| 1112 | 4545 | 888 0 60 | 85F8 | 4649 | 3 | | 35 |
| | | | | | • | STA TEMP2 | |
| 1113 | 4649 | 858 0 25 | Befc | 4153 | | LDA MLOC | 7F |
| 1114 | 4153 | 888 0 30 | COOA | 4507 | 7 | LDL RA | |
| 1115 | 4507 | 888 0 85 | 4459 | 4686 | | MUL# 00000 | 0A005 |
| 1116 | 4686 | 858 0 60 | 83F9 | 4140 | | STA TEMP | |
| 1117 | 4140 | 888 0 26 | 4693 | 4693 | | CLA | |
| 1118 | 4693 | 888 0 32 | 0400 | 4650 | | | |
| | | | | | | • • | |
| 1119 | 4650 | 888 0 25 | 000C | 4104 | | LDA RX | |
| 1120 | 4104 | 888 0 70 | ACCO | 4659 | | ADD RA | |
| 1121 | 4659 | 888 C 35 | 4711 | 4463 | | ERS# OOHHH | H0000 |
| 1122 | 4463 | 88B 0 20 | 4315 | 000A | | BUF | RA |
| 1123 | 4315 | 888 0 08 | 0000 | 4370 | | LIR1 0000 | . , |
| 1124 | 4370 | 888 0 26 | 4173 | 4173 | | CLA | |
| 1125 | | | | | | | |
| | 4173 | 888 0 75 | 83F8 | 4328 | | SUB TEMP | |
| 1126 | 4328 | 888 0 37 | 0300 | 4334 | | SHL 0300 | |
| 1127 | 4334 | 888 0 35 | 4136 | 4338 | | ERS# 00000 | 30000 |
| 1128 | 4338 | 888 0 75 | 4340 | AOOO | | SUB | RA |
| 1129 | 4340 | 888 0 02 | 0000 | 4195 | | LIR 0000 | × 17 : |
| 1130 | 4195 | 888 0 25 | BJFB | 4099 | | LDA TEMP | |
| 1131 | | | | | | | |
| | 4099 | 888 0 37 | 0600 | 4108 | | SHL 0600 | |
| 1132 | 4108 | 888 0 35 | 4360 | 4162 | | ERS# 000HO | 00000 |
| 1133 | 4162 | 888 0 20 | 4314 | 4316 | | BUF 1F | |
| 1134 | | | | | | ннн с | |
| 1135 | 4316 | 888 0 77 | 4316 | 8965 | | ATL | OF |
| 1136 | 8965 | 888 2 00 | 8403 | 8403 | 0 | JMP4 B0000 | |
| 1137 | 8403 | 888 1 25 | 8409 | | 80000 | | 2F |
| 1138 | | | | 8966 | | LDA2 80006 | |
| | 8406 | 88B 1 25 | 8413 | 8966 | 80003 | LDA2 80010 | 2F |
| 1139 | 8404 | 888 0 00 | 0000 | 0000 | 80001 | CON 00000 | 00000 |
| 1140 | 9407 | 858 0 HH | HHHH | HHHH | 80004 | CON HHHHH | ннннн |
| 1141 | 8966 | 888 2 05 | B404 | 0008 | 2 | LDX4 80001 | RL |
| 1142 | 4314 | 888 0 32 | 0000 | 8967 | ī | SHR 0000 | 7F |
| 1143 | 8967 | 388 0 60 | B2FC | 3968 | , | STA MASK | 7.5 |
| 1144 | 8968 | | | | , | | . g. 4 |
| | | 888 2 30 | 8405 | 8969 | | LDL4 80002 | -82 |
| 1145 | 8969 | 888 0 29 | 8418 | 0008 | -82 | LDA1 00001 | RL |
| 1146 | 8405 | 88B 0 20 | 82FC | 8971 | 80002 | BUF MASK | 8F |
| 1147 | 8408 | 898 0 35 | BZFC | 3971 | 80005 | ERS MASK | 8F |
| 1148 | 8409 | 898 0 50 | 0000 | 0000 | 80006 | CON 50000 | 00000 |
| | | | | | | | |

| | | | - | | | | | | | |
|------|--------------|-----|---|------------|--------------|--------------|-------------|-------------|--------------|----------------|
| 1149 | 8410 | 888 | ٥ | 40 | 0000 | 0000 | 80007 | CON | 40000 | 00000 |
| 1150 | 8411 | 888 | 0 | 20 | 0000 | 0000 | 80008 | CON | 20000 | 00000 |
| 1151 | 8412 | 898 | 0 | 10 | 0000 | 0000 | 50009 | CON | 10000 | 00000 |
| 1152 | 8413 | 888 | | CH | HHHH | HHHH | 80010 | CON | СНННН | нннн |
| 1153 | 8414 | 888 | | BH | HHHH | HHHH | 80011 | CON | ВНННН | ННННН |
| 1154 | 8415 | 888 | | FH | HHHH | HHHH | 80012 | CON | FHHHH | НННН |
| 1155 | 8416 | 888 | _ | GH | НННН | НННН | 80013 | CON | GHHHH | НННН |
| 1156 | 8971 | 888 | - | 64 | 8418 | 3972 | 8 | STAL | | * 10 4 30 47 5 |
| 1157 | 8972 | 888 | | 25 | 85F8 | 9973 | • | LDA | TEMP2 | |
| 1158 | 8973 | 888 | | 75 | 84F8 | 8974 | | SUB | TEMPL | |
| 1159 | 8974 | 888 | | 70 | 8975 | 8976 | | ADD | 12 | -81 |
| 1160 | 8975 | 888 | | 99 | 9999 | 9999 | | CON | 99999 | 99999 |
| 1161 | 8977 | 888 | | 60 | 85F8 | 4450 | 881 | STA | TEMP2 | BVAR |
| 1162 | 4496 | 888 | | OG | 0000 | 8978 | BVARI | IIRI | 0000 | # TA1 |
| 1163 | 8978 | 888 | | 70 | 8979 | 8969 | - V | ADD | 0000 | -82 |
| 1164 | 8979 | 888 | | 99 | 9800 | 0000 | | CON | 99980 | 00000 |
| 1165 | 8970 | 888 | | 20 | 8980 | 000A | 8 82 | SUF | | RA |
| 1166 | 8980 | 888 | | QB | 0000 | 3981 | -0- | LIRI | 0000 | .776 |
| 1167 | 8981 | 888 | | 25 | BZFC | 5982 | | LDA | MASK | |
| 1168 | 8982 | 888 | | 30 | 000C | 8983 | | LDL | RX | |
| 1169 | 8983 | 888 | | 32 | 0100 | 8984 | | SHR | 0100 | |
| 1170 | 8984 | 888 | | 82 | 8985 | 8967 | | TEQ | 0100 | 78 |
| 1171 | 8985 | 888 | | 07 | 0001 | 3986 | | IIR2 | 0001 | , • |
| 1172 | 8986 | 888 | | 30 | 8967 | 8965 | | LDL | 78 | QB |
| 1173 | 2700 | 900 | J | J V | 4707 | 0703 | | HHH | | Н |
| 1174 | 84AG | 888 | ٥ | 05 | 4718 | 4179 | EQU | LDX | 2F | rpzer |
| 1175 | 4718 | 888 | | 60 | | | | | | |
| 1176 | 4134 | 388 | | 30 | B6FC BJAG | 8976 | 2 Perr | STA | MLOC | -81 583 1 4 |
| 1177 | BASE | 688 | | 25 | BJFC | 8736 4570 | | LDL | PSUDX | ERR1* |
| 1178 | 4570 | 858 | | 70 | 4772 | 4775 | COR | LDA ADD# | CORE | 10000 |
| 1179 | 4775 | 888 | | 06 | 4528 | 4528 | | CLX | 00000 | 10000 |
| 1180 | 4528 | 898 | | 32 | 0400 | 4785 | | SHR | 0400 | |
| 1181 | 4785 | 888 | | 20 | 4687 | 4589 | | BUF# | - | 08000 |
| 1182 | 4589 | 388 | | 60 | 86FC | 4143 | | STA | * * . | 09000 |
| 1183 | 4143 | 888 | | 05 | 4395 | 4179 | | | MLOC 2F | FP2ER |
| 1184 | 4395 | 888 | | 37 | 0400 | 4502 | 2 | LDX | 0400 | PFEEN |
| 1185 | 4502 | 858 | | | BSFC | 4707 | • | SHL | CORE | |
| 1186 | 4707 | 888 | _ | | 000A | | | ADD | | |
| 1187 | 4161 | 888 | Ö | | 4663 | 4161 4516 | | LDX ADD | RA | -83 |
| 1188 | 4663 | 888 | | 99 | 9000 | 0000 | | CON | 99900 | 00000 |
| 1189 | 4517 | 888 | | 25 | 4169 | 4321 | 483 | | | |
| 1190 | 4321 | 888 | Õ | | 4134 | 8760 | 400 | LDA | | 0000g ERR2* |
| 1191 | 4516 | 888 | 0 | | BJFC | | _27 | LDX | PERR | |
| 1192 | 8976 | 888 | | 08 | 0000 | 8976 #373 | -83 | STX | CORE | -B1 |
| 1193 | 4373 | 858 | ò | | | 4373 | -81 | LIR3 | 0000 | |
| 1194 | 4336 | 886 | 0 | | 4134 | 4336 | | LDX | PERR | # TAIR + |
| 1195 | 4538 | | | | 4538 | 3810 | | LDL | V8000 | FIND* |
| 1196 | 4336 8688 | 398 | | 00 | 8688 | 3688 3688 | VANA | | X0000 | . = |
| | | 888 | 0 | | BEFC | 4097 | X0000 | LDA | MLOC | 1F |
| 1197 | 8689 | 888 | _ | 25 | BOFC | 4097 | X0001 | LDA | MLOC | 1 F |
| 1198 | 3690 | 888 | 0 | OU | BJAG | BACE | X0002 | JMP | PSUDX | |

C4. RESERVE CORE
IF M IS UNDEFINED. OR THERE ISNT ENOUGH ROOM
IN CORE THIS IS AN ERROR. OTHERWISE RESERVE
THE SPACE IN CORE. AND GO TOWCS.

C5. DEFINE ADDRESS

FIND A (ROUTINE Q). IF DEFINED: OR IF A
PAIR ADDRESS: THE A FIELD IS IN ERROR: ELSE
IF NONBLANK DEFINE IT (ROUTINE D).
GO TO#P15:

| 1200 | 8691 | 888 0 25 | B6FC | 4097 | X0003 | LDA | MLOC | 1F | | |
|------|------|----------|-------------|------|----------|-----|---|----------|-------------|--|
| 1201 | 8692 | 888 0 25 | BOFC | 4097 | X0004 | LDA | MLOC | 1F | | |
| 1202 | 8693 | 888 0 00 | 4134 | 4134 | X0005 | JMP | PERR | • | | |
| 1203 | 4097 | 888 0 30 | BJAG | 3861 | 1 | LDL | PSUDX | DEFN+ | | |
| 1204 | | | | | • | ННН | , 300 | | | |
| 1205 | 4239 | 888 0 05 | 4056 | 0458 | ONN | LDX | ONSW | 1F | | |
| 1206 | BSAH | 888 0 05 | 0470 | 0458 | OFF | LDX | OFFSW | 1F | C6. | ON OFF |
| 1207 | 0458 | 888 0 65 | B9FH | 0462 | 1 | STX | OPTIM | 4. | | IF M ADDRESS MATCHES THE TYPE OF PROGRAM. THE |
| 1208 | 0462 | 888 0 05 | 0464 | 4179 | • | LDX | • | FP2ER | | MASTER SWITCH IS TURNED ON OR OFF. GO TOMP15. |
| 1209 | 0464 | 88B 0 30 | 0466 | 0468 | | LDL | TYPE | | | SACIER CARROLL STREET SHOULD S |
| 1210 | 0468 | 888 0 82 | 0471 | BJAG | | TEQ | • • • | PSUDX | | |
| 1211 | 0471 | 888 0 30 | BOFH | 0475 | | LDL | OPTIM | | | |
| 1212 | 0475 | 888 0 50 | 4439 | BACB | | STL | SWICH | PSUDX | | |
| 1213 | BEAH | 88B 0 67 | 0008 | 0568 | TYP | HLT | RL | | | |
| 1214 | 0568 | 888 0 50 | 0466 | 0668 | • •• | STL | TYPE | | | |
| 1215 | 0668 | 888 0 50 | 0241 | BACE | | STL | 0241 | PSUDX | | |
| 1216 | 0470 | 888 0 31 | 0473 | 0473 | OFFSW | ČLĽ | 24 ,0 | , 0,00,0 | | |
| 1217 | 0473 | 888 0 25 | 87FH | 0477 | -, , . | LDA | FTAG | | c7. | ASSEMBLER OFF |
| 1218 | 0477 | 888 0 82 | 0480 | 4189 | | TEQ | . , | -PR1 | | FIF FLOWCHARTING . GD TOMEL. |
| 1219 | 0480 | 898 0 25 | 0482 | 0484 | | LDA | 1F | ,. | | COTHERWISE PRINT THE WORD OFF ON THE LISTING. |
| 1220 | 0484 | 888 0 05 | 0486 | 0488 | | LDX | 2F | | U. 1 | RETURNING TOMP17. |
| 1221 | 0488 | 888 0 60 | 0365 | 0567 | | STA | 0365 | | | |
| 1222 | 0567 | 888 0 65 | 0370 | 0572 | | STX | 0370 | | | |
| 1223 | 0572 | 88B 0 06 | 0575 | 0575 | | CLX | V 2. V | | | |
| 1224 | 0575 | 888 0 63 | 0575 | 0578 | | ZAP | | | | |
| 1225 | 0578 | 888 0 60 | 0250 | 0452 | | STA | 0250 | | | |
| 1226 | 0452 | 88B 0 65 | 0255 | 0457 | | STX | 0255 | | | |
| 1227 | 0457 | 898 0 60 | 0281 | 0483 | | STA | 0281 | | | |
| 1228 | 0483 | 888 0 65 | 0286 | 4112 | | STX | 0286 | FIN | | |
| 1229 | 0482 | 88 0 88 | 8866 | 6588 | 1 | NUM | *** 0 | FF ** | | |
| 1230 | 0486 | 888 0 22 | 2021 | 1022 | 2 | ZON | *** 0 | FF ** | | ^ |
| 1231 | | | | | | ННН | н | • • • • | | |
| 1232 | 4332 | 888 0 77 | 4332 | 4536 | CMPL* | ATL | * * | | X. | EXAMINE REMARKS FIELD |
| 1233 | 4536 | 888 0 25 | BOAC | 4540 | 4 | LDA | MUMI | | G | CMPL* PUTS INSTRUCTION IN RA INTO MUM CODE |
| 1234 | 4540 | 888 0 60 | BTAC | 4344 | | STA | MUML | 1F | Ğ | MUML IS THE LOCATION OF LAST MUM INSTR. |
| 1235 | 4736 | 88B 0 25 | BEAC | 4344 | COMP# | LDA | MUMI | 1F | Ğ | COMP* PUTS WORD IN RL INTO MUM CODE |
| 1236 | 4344 | 888 0 70 | 4696 | 4299 | 1 | | 00000 | 20000 | Ğ | BUT IT ISNT REALLY AN INSTRUCTION |
| 1237 | 4299 | 888 0 60 | BOAC | 4353 | <u>-</u> | STA | MUMI | 2F | Ğ | EXIT IS IN RX. IN BOTH CASES. |
| 1238 | 4353 | 888 0 70 | 4305 | AOOO | 2 | ADD | | RA | • | THIS ROUTINE IS ENTERED ON EVERY CARD EXCEPT |
| 1239 | 4305 | 888 0 50 | 5199 | 000C | | STL | ₩9999 | RX | | PAT AFTER FLO HAS APPEARED. |
| 1240 | 4740 | 888 0 50 | 4342 | 4544 | COMT* | STL | -com | | | THE PURPOSE IS TO SEND INFORMATION TO PASS 3 |
| 1241 | 4544 | 888 0 25 | BBAC | 4548 | | LDA | COMI | | | FOR FLOWCHARTING. THIS INFORMATION IS |
| 1242 | 4548 | 888 0 60 | 82A8 | 4702 | | STA | RB4 | | | TRANSMITTED AS A *MADE-UP-MACHINE + OR MUM |
| 1243 | 4702 | 888 0 25 | 4304 | 4156 | | LDA | | 8F | | PSEUDOCODE. SPECIFICATIONS OF HUM GIVEN |
| 1244 | 4304 | 856 0 00 | B678 | 3669 | | JMP | R0009 | R0000 | | IN THE PASS 3 LISTING. |
| 1245 | 4156 | 888 2 88 | 3400 | 4573 | 8 | | COMTS | | G | MOVE ALL REMARKS TO THE COMMENTS TAPE |
| 1246 | 4573 | 888 2 07 | 0010 | 4377 | | | 0010 | | G | FOR USE BY PASS 3. |
| 1247 | 4377 | 888 0 60 | BBAC | 4331 | | STA | COMI | | - | The second of th |
| 1248 | 4331 | 88B 0 70 | 4583 | 4342 | | ADD | | -COM | | |
| | | | | | | . , | | | | |

| 1249 | 4583 | 888 | J 99 | 9800 | 0000 | | CON | 99980 | 00000 |
|------|------|-------|------|------|------|------|------|-------|------------|
| 1250 | 4343 | 898 | 0 60 | BBAC | 4297 | &COM | STA | COMI | |
| 1251 | 4297 | | 0 05 | 4699 | 4301 | | LDX | 25 | |
| 1252 | 4301 | | 0 30 | 4553 | 3919 | | LDL | | TSUB* |
| 1253 | 4553 | 688 | 0 6 | 3400 | 4699 | | TBL | COMTS | 2F |
| 1254 | 4699 | | 0 HZ | 0700 | 4342 | 2 | TWR | OTAPS | -COM |
| 1255 | 4505 | | 0 25 | 8669 | 4109 | BDK | LDA | R0000 | |
| 1256 | 4109 | | 0 35 | 4361 | 4313 | | ERSA | 00000 | HHHHH |
| 1257 | 4313 | 858 | | 8669 | 4667 | | STA | R0000 | |
| 1258 | 4667 | | 0 25 | 8670 | 4521 | | LDA | R0001 | |
| 1259 | 4521 | | 0 35 | 4773 | 4326 | | ERS# | | ннинн |
| 1260 | 4326 | 888 | | 4728 | 4580 | | BUF# | 88888 | 00000 |
| 1261 | 4580 | | 0 60 | 8670 | 000B | | STA | R0001 | RL |
| 1262 | 4312 | | 1 08 | 0007 | 4515 | FLOW | LIR3 | 0007 | **** |
| 1263 | 4515 | | 0 25 | 8670 | 4519 | FEOW | LDA | ROODI | |
| 1264 | 4519 | | 0 06 | 4124 | 4124 | | CLX | 11000 | |
| 1265 | 4124 | | 0 65 | BSFH | 4178 | | STX | RTAG | |
| 1266 | 4178 | | 0 32 | 0500 | 4186 | | SHR | 0500 | |
| 1267 | 4186 | 888 | | 4186 | 4789 | | ATL | 0300 | |
| 1268 | 4789 | | 0 25 | B669 | 4543 | | LDA | R0000 | |
| 1269 | 4543 | | 0 35 | 4595 | 4497 | | ERS# | ннннн | 00000 |
| 1270 | 4497 | | 0 20 | 0008 | 4501 | | BUF | | 0000 |
| 1271 | | | | | | | | RL | |
| 1272 | 4501 | | 0 60 | BOAB | 4705 | | STA | DK | 20202 |
| | 4705 | 888 | | 4157 | 4309 | | LDL# | 00000 | 88888 |
| 1273 | 4309 | 888 | | 4362 | 4562 | | TEO | \$5 | |
| 1274 | 4562 | | 0 30 | 4514 | 4716 | | LDL# | 03000 | 87888 |
| 1275 | 4716 | | 0 82 | 4719 | 4369 | | TEO | | 1F |
| 1276 | 4719 | | 0 60 | Bafh | 4324 | | STA | RTAG | w 4 |
| 1277 | 4324 | | 30 | 4362 | 4505 | • | LDL | \$5 | BOK |
| 1278 | 4369 | | 0 30 | 4721 | 4524 | 1 | LDL# | 01000 | 87888 |
| 1279 | 4524 | | 0 82 | 4577 | 4777 | | TEO | | 1F |
| 1280 | 4577 | | 0 30 | 4112 | 4505 | | LDL | FIN | BDK |
| 1281 | 4777 | | 0 30 | 4379 | 4531 | 1 | LDL# | 01211 | 83649 |
| 1585 | 4531 | | 0 82 | 4534 | 4734 | | TEQ | \$6 | |
| 1283 | 4734 | | 0 30 | 4386 | 4738 | | LDL# | 03112 | 83123 |
| 1284 | 4738 | | 0 82 | 4141 | 4341 | | TEO | | 1F |
| 1285 | 4141 | | 0 05 | 4534 | 4736 | | LDX | 56 | COMP* |
| 1286 | 4341 | 888 | | 4743 | 4795 | 1 | - | НОННН | НОННН |
| 1287 | 4795 | 888 | | 4697 | 4149 | | | 00100 | BOABB |
| 1268 | 4149 | 898 | | 4152 | 4352 | | TEO | 54 | |
| 1289 | 4352 | 88B (| - | 4504 | 4356 | | | ННННН | HHOHH |
| 1290 | 4356 | 888 | • | 4308 | 4560 | | | 00010 | BOUAB |
| 1291 | 4560 | 888 | _ | 4513 | 4713 | | TEG | 1F | |
| 1292 | 4713 | 888 | | 4715 | 4117 | | ERSA | HHHHH | HOHH |
| 1293 | 4117 | 888 | | 4569 | 4171 | | LOL# | 00001 | AOOOB |
| 1294 | 4171 | 888 | | 4174 | 4374 | | TEG | | S 3 |
| 1295 | 4174 | 888 | 25 | BOAR | 4378 | | LDA | DK | |
| 1296 | 4378 | 888 | 0 35 | 4780 | 4532 | | ERS# | 00000 | OHHO |
| 1297 | 4532 | 888 | 0 37 | 0300 | 4188 | | SHL | 0300 | 2F |
| 1298 | 4513 | 888 | 0 25 | BOAR | 4317 | 1 | LDA | DK | |
| | | | | | | | - | | |

G BOK: BLANK OUT COLS 32-35 AND GO TO RL.

X1. WHAT DK FIELD
COLUMNS 32-35 ARE THE DOCUMENTATION KEY OR DK
FIELD. AND THEY CONTROL THE FLOWCHARTING OPER
ATION.

IF THE DK FIELD IS BLANK. GO TO#X2.

G :IF IT IS G. BLANK IT OUT AND GO TO#P17.

G IS USED TO PUT REMARKS ON THE ASSEMBLY LISTING.

COD: IF IT IS CODI. THIS IS THE BEGINNING OF THE WORDS CODING DETAILS. TOWAS.

TAB: IF IT IS TABL. THIS IS THE BEGINNING OF THE WORDS TABLE OF CONTENTS. COMPILE THE DK FIELD AS AN OJ OP IN MUM CODE. THIS SPECIAL CASE IS EXAMINED BY PASS J. THEN GO TOWNJ.
K. :IF IT IS THE FORM K. THIS INDICATES A NEW

SECTION WITH KEY K. GO TOMAG.
KN.: IF IT IS OF THE FORM KN. OR KNN. IT IS A NEW SUBSECTION NAME. CHECK THAT THEY ARE NUMBERED SEQUENTIALLY AND IF NO ERROR GO TOMAG.
OTHRANYTHING ELSE IS A CONDITION NAME. TOMAS.

| 1299 | 4317 | 888 | 0 3 | 55 4769 | 4371 | | ERS# | 00000 | 0000 |
|------|------|-----|-----|---------|------|------------|------|---------------|-------------|
| 1300 | 4371 | | | 7 0200 | 4188 | | SHL | 0200 | 2F |
| 1301 | 4188 | | | AODO OT | 4193 | 2 | ADD | RA | |
| 1302 | 4193 | | | 30 4146 | 4748 | _ | LDL | N | |
| 1303 | 4748 | | | 37 4701 | 4151 | | TGR | 52 | |
| 1304 | 4151 | | | 10 4362 | 8736 | | LDL | \$5 | ERR1+ |
| 1305 | 4362 | | | OB 0000 | 4367 | S 5 | LIRI | 2 0000 | -NO# |
| 1306 | 4367 | | | 9 8670 | 4574 | -NO# | | R0001 | 1401 |
| 1307 | 4574 | | | 55 4526 | 4578 | 140 | ERS# | 88888 | 88888 |
| 1308 | 4578 | | | 75 000A | 4783 | | SUB | RA | 50000 |
| 1309 | 4783 | | 0 7 | | 4586 | | ATL | 0.0 | |
| 1310 | 4586 | | | 29 8670 | 4541 | | | R0001 | |
| 1311 | 4541 | | | 55 4393 | 4346 | | ERS# | 66666 | 66666 |
| 1312 | 4346 | 888 | | | 4349 | | MTX | 00000 | 00000 |
| 1313 | 4349 | 888 | | 0 4351 | 4704 | | ADD# | 33333 | 33333 |
| 1314 | 4704 | | o i | | 4508 | | ERS | RL | |
| 1315 | 4508 | 988 | | 77 4508 | 4561 | | ATL | NC. | |
| 1316 | 4561 | 898 | | 29 8669 | 4166 | | | R0000 | |
| 1317 | 4166 | | | 70 4568 | 4571 | | ADD# | 33333 | 33333 |
| 1318 | 4571 | | | 55 0008 | 4726 | | ERS | RL | |
| 1319 | 4726 | | 0 3 | | 4579 | | CLL | NL. | |
| 1320 | 4579 | | | 32 4732 | 4182 | | TEQ | | 1F |
| 1321 | 4732 | | | 0002 | 4786 | | IIRI | 0002 | •* |
| 1322 | 4786 | | | 70 4388 | 4367 | | ADD | 000- | -NO# |
| 1323 | 4388 | | | 9990 | 0000 | | CON | 99999 | 00000 |
| 1324 | 4368 | 886 | - | 00 4534 | 4534 | &NO# | JMP | \$6 | |
| 1325 | 4182 | | 0 3 | | 4137 | 1 | LDL# | 11111 | 11111 |
| 1326 | 4137 | | 0 2 | | 4741 | - | BUF | RL | |
| 1327 | 4741 | | | 5 000A | 4770 | | MUL | RA | |
| 1328 | 4770 | | | 55 4774 | 4176 | | ERS# | 00000 | 0000H |
| 1329 | 4176 | | | 7 0600 | 4337 | | SHL | 0600 | |
| 1330 | 4337 | | 0 7 | 77 4337 | 4390 | | ATL | | |
| 1331 | 4390 | 888 | 0 7 | 70 4542 | 4546 | | ADD | 15 | |
| 1332 | 4546 | | | O BOAC | 4100 | | STA | SHRI | |
| 1333 | 4100 | 888 | 0 2 | 25 4552 | 4154 | | LDA# | 00090 | 00000 |
| 1334 | 4154 | 888 | 0 7 | 75 0008 | 4509 | | SUB | RL | |
| 1335 | 4509 | 888 | 0 7 | 70 4542 | 4746 | | ADD | 1F | |
| 1336 | 4746 | 888 | | | 4300 | | STA | SHRZ | 2F |
| 1337 | 4542 | | 0 3 | | 0008 | 1 | SHR | 0000 | RL |
| 1338 | 4300 | | 0 2 | | 4155 | 2 | | R0001 | - , — |
| 1339 | 4155 | | | 9 8672 | 4760 | ~ | | R0003 | |
| 1340 | 4760 | | 0 3 | | BOAC | | LDL | | SHR1 |
| 1341 | 4762 | | 0 3 | | 4768 | | | ННННН | ВННН |
| 1342 | 4768 | | | 5 B3FB | 4376 | | STX | TEMP | |
| 1343 | 4376 | | | 0 4778 | BIAC | | LDL | + Bag - 1- | SHR2 |
| 1344 | 4778 | | 0 3 | | 4384 | | SHR | 0100 | |
| 1345 | 4384 | | 0 | | 4590 | | | R0001 | |
| 1346 | 4590 | | | 9 8669 | 4196 | | | R0000 | |
| 1347 | 4196 | | | 9 8671 | 4551 | | | R0002 | |
| 1348 | 4551 | | | 30 4753 | BOAC | | LDL | | SHR1 |
| | | - | | | | | | | |

X2. SCAN FOR # LOOK THROUGH ALL REMARKS FOR A NUMBER SIGN.

GATHER TOGETHER THE SHARACTERS FOLLOWING IT.

UP UNTIL THE NEXT CHARACTER WITH UNDIGITS.

THE PRINTING CHARACTERS + AND / ARE NOT

DELIMITERS. THE OTHERS ARE.) THIS FORMS THE

BRANCH WORD. IF NO CONDITION PRECEDED.

COMPILE AN 09 OP. IF THE BRANCH WORD REFERS

TO THIS CHART. PUT M AND C INTO THE LAST

COMPILES INSTRUCTION. PUT A RECORD FOR THIS

ENTRY AND N IN THE STOP TABLE AS THE LAST

BRANCH TO M. OTHERWISE. COMPILE THE BRANCH

WORD INTO THE MUM CODE.

| IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT. THE RECIPIENT AGREES NOT TO REPRODUCE. COPY. USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED. IN WHOLE OR IN PART. OR TO SUFFER SUCH ACTION BY OTHERS. FOR ANY PURPOSE. EXCEPT WITH THE WRITTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION, UPON DEMAND | |
|--|--|
| IN CONSIDERATION O REPRODUCE, COPY, USE OR TRAN IN WHOLE OR IN PART, OR TO SU WRITTEN PERMISSION OF SPER SAME TO SPERRY RAND CO | |

| 1349 | 4753 | 888 0 | 35 | 4357 | 4709 | | ersh | HHHHH | HHHHO |
|------|------|-------|----|------|------|---|------|--------------|-------|
| 1350 | 4709 | 888 0 | 30 | 4761 | BIAC | | LDL | | SHR2 |
| | | | | | | | | A100 | 31416 |
| 1351 | 4761 | 888 0 | | 0100 | 4717 | | SHR | 0100 | |
| 1352 | 4717 | 888 0 | 69 | 8669 | 4576 | | STX1 | R0000 | |
| 1353 | 4576 | 888 0 | 30 | 4779 | BOAC | | LDL | | SHR 1 |
| 1354 | 4779 | 888 | | 4584 | 4537 | | ERSA | ННННН | 00000 |
| | | | | | | | | ULA III II I | 00000 |
| 1355 | 4537 | 858 0 | 77 | 4537 | 4790 | | ATL | | |
| 1356 | 4790 | 888 0 | 25 | BJFB | 4744 | | LDA | TEMP | |
| 1357 | 4744 | 888 0 | | 4147 | 4147 | | CLX | • • | |
| | | _ | _ | | | | | | |
| 1358 | 4147 | 888 | | 0500 | 4355 | | SHR | 0500 | |
| 1359 | 4355 | 55B 0 | 20 | 0009 | 4159 | | BUF | RL | |
| 1360 | 4159 | 858 0 | 60 | 83F8 | 4163 | | STA | TEMP | |
| 1361 | 4163 | _ | | - | | | | | |
| | | | | 87AC | 4167 | | LDA | MUML | |
| 1362 | 4167 | 888 0 | 60 | BZAB | 4771 | | STA | R84 | |
| 1363 | 4771 | 888 2 | 25 | 5201 | 4354 | | LDA4 | W0001 | |
| 1364 | 4354 | 858 0 | | 4556 | 4363 | | ADD | | -# |
| 1365 | 4556 | | | | | | | 00000 | |
| | | | | 0000 | 0000 | | CON | 98000 | 00000 |
| 1366 | 4363 | 888 0 | 25 | 4566 | 4776 | - # | LDA# | 09000 | 00000 |
| 1367 | 4776 | 888 0 | 05 | 4364 | 4332 | | LDX | 8# | CMPL* |
| 1368 | 4364 | 888 0 | | BJFB | 4731 | &#</td><td>LDL</td><td>TEMP</td><td>J</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>Œ#</td><td></td><td>1 Etst.</td><td>. ==</td></tr><tr><td>1369</td><td>4731</td><td>888 0</td><td>05</td><td>4784</td><td>4737</td><td></td><td>LDX</td><td></td><td>1F</td></tr><tr><td>1370</td><td>4784</td><td>858 0</td><td>88</td><td>88BQ</td><td>0000</td><td></td><td>CON</td><td>88888</td><td>00000</td></tr><tr><td>1371</td><td>4737</td><td>888 0</td><td>25</td><td>4191</td><td>4593</td><td>1</td><td>LDA</td><td></td><td>8F</td></tr><tr><td></td><td></td><td>_</td><td></td><td></td><td></td><td>•</td><td></td><td>****</td><td></td></tr><tr><td>1372</td><td>4191</td><td>888 1</td><td>-</td><td>0000</td><td>0000</td><td></td><td>CONT</td><td>00000</td><td>00000</td></tr><tr><td>1373</td><td>4593</td><td>88B 0</td><td>70</td><td>0008</td><td>4198</td><td>8</td><td>ADD</td><td>RL</td><td></td></tr><tr><td>1374</td><td>4198</td><td>898 0</td><td>82</td><td>4751</td><td>4752</td><td></td><td>TEQ</td><td>25</td><td></td></tr><tr><td>1375</td><td>4752</td><td>-</td><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td>0008</td><td>4756</td><td></td><td>LDA</td><td>RL</td><td></td></tr><tr><td>1376</td><td>4756</td><td>688 0</td><td></td><td>0100</td><td>4563</td><td></td><td>SHR</td><td>0100</td><td></td></tr><tr><td>1377</td><td>4563</td><td>888 0</td><td>35</td><td>4165</td><td>4567</td><td></td><td>ERS#</td><td>OHHHH</td><td>OHHHH</td></tr><tr><td>1378</td><td>4567</td><td>888 0</td><td>77</td><td>4567</td><td>4737</td><td></td><td>ATL</td><td></td><td>18</td></tr><tr><td>1379</td><td>4751</td><td>898</td><td></td><td></td><td></td><td>2</td><td></td><td>**</td><td>10</td></tr><tr><td></td><td></td><td></td><td></td><td>0000</td><td>4555</td><td>2</td><td>LDA</td><td>RX</td><td></td></tr><tr><td>1380</td><td>4555</td><td>888 0</td><td>35</td><td>4557</td><td>4359</td><td></td><td>ers#</td><td>00000</td><td>HHHHH</td></tr><tr><td>1381</td><td>4359</td><td>888 0</td><td>20</td><td>9000</td><td>4763</td><td></td><td>BUF</td><td>RL</td><td></td></tr><tr><td>1382</td><td>4763</td><td>38B 0</td><td></td><td>4763</td><td>4766</td><td></td><td>ATL</td><td>1.5</td><td>2F</td></tr><tr><td>1383</td><td></td><td></td><td></td><td></td><td></td><td>•</td><td></td><td></td><td>45</td></tr><tr><td></td><td>4766</td><td>888 0</td><td></td><td>83F8</td><td>4181</td><td>2</td><td>LDA</td><td>TEMP</td><td></td></tr><tr><td>1384</td><td>4181</td><td>888 0</td><td>50</td><td>BJFB</td><td>4187</td><td></td><td>STL</td><td>TEMP</td><td></td></tr><tr><td>1385</td><td>4187</td><td>888 0</td><td>35</td><td>4391</td><td>4793</td><td></td><td>ERS#</td><td>H0000</td><td>H0000</td></tr><tr><td>1386</td><td>4793</td><td>888 0</td><td></td><td>B9AC</td><td></td><td></td><td></td><td></td><td>11000</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>4347</td><td></td><td>LDL</td><td>KEY</td><td></td></tr><tr><td>1367</td><td>4347</td><td>888 0</td><td></td><td>4500</td><td>4700</td><td></td><td>TEQ</td><td></td><td>2F</td></tr><tr><td>1388</td><td>4500</td><td>888 0</td><td>25</td><td>33F8</td><td>4554</td><td></td><td>LDA</td><td>TEMP</td><td></td></tr><tr><td>1389</td><td>4554</td><td>888 0</td><td>35</td><td>4757</td><td>4559</td><td></td><td>ERSA</td><td>-</td><td>HHHOO</td></tr><tr><td>1390</td><td>4559</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>888 0</td><td></td><td>4714</td><td>4767</td><td></td><td></td><td>00000</td><td>88800</td></tr><tr><td>1391</td><td>4767</td><td>888 0</td><td>82</td><td>4381</td><td>4581</td><td></td><td>TEO</td><td></td><td>3F</td></tr><tr><td>1392</td><td>4381</td><td>888 0</td><td>25</td><td>4387</td><td>4591</td><td></td><td>LDA</td><td></td><td>4F</td></tr><tr><td>1393</td><td>4387</td><td>888 0</td><td></td><td>0000</td><td>OOOH</td><td></td><td></td><td>00000</td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>•</td><td>CON</td><td>00000</td><td>0000H</td></tr><tr><td>1394</td><td>4581</td><td>388 0</td><td></td><td>BJFB</td><td>4587</td><td>3</td><td>LDA</td><td>TEMP</td><td></td></tr><tr><td>1395</td><td>4587</td><td>888 0</td><td>35</td><td>4791</td><td>4194</td><td></td><td>ERS#</td><td>HHOHH</td><td>HHOOO</td></tr><tr><td>1396</td><td>4194</td><td>898 0</td><td></td><td>4396</td><td>4398</td><td></td><td></td><td>00000</td><td>88000</td></tr><tr><td></td><td>-</td><td></td><td></td><td>-</td><td></td><td></td><td></td><td>10000</td><td></td></tr><tr><td>1397</td><td>4398</td><td>898 0</td><td></td><td>4754</td><td>4700</td><td></td><td>TEQ</td><td></td><td>2F</td></tr><tr><td>1398</td><td>4754</td><td>888 0</td><td>25</td><td>4708</td><td>4591</td><td></td><td>LDA</td><td></td><td>4F</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>÷</td><td></td><td></td><td></td><td>-</td></tr></tbody></table> | | | |

1400

1401

1402

1403

1404

1405

4708

4596

4755

4164

4781

4787

888 0 00

888 0 35

888 0 37 888 0 70

888 0 60

888 0 77

888 0 25

0000

BJFB

0400

OODA

B2AB

4781

4742

OOHH

4596

4755

4164

4781

4787

4394

CON

ERS

SHL

STA

ATL

LDA

00000

0400

TEMP

RA

R84

SERAL

000HH

| 1403 | 7101 | 000 | v | 23 | 4746 | 4274 | | LUA | 35KYF | | | | | | | | | |
|------|------|------------|---|----|------|------|--------------|------|---|--------------------------------|------|-------------|-------|--------|--------|-----------|---------------|----------|
| 1406 | 4394 | 886 | 0 | 70 | 4796 | 4549 | | ADD# | 00000 | 00001 | | | | | | | | |
| 1407 | 4549 | 858 | | | 4742 | 4594 | | STA | SERAL | | | | | | | | | |
| 1408 | 4594 | 888 | | | 0008 | 4749 | | ADD | RL | | | | | | | | | |
| 1409 | 4749 | 888 | | | BTAC | 4158 | | LDX | MUML | | | | | | | | | |
| 1410 | 4158 | 888 | | 65 | BJAB | 4564 | | STX | R85 | | | | | | | | | |
| 1411 | 4564 | 38B | | | 5201 | 4358 | | | M0001 | | | | | | | | | |
| 1412 | 4358 | 888 | | | | | | | | | | | | | | | | |
| 1413 | 4558 | | | | 5201 | 4558 | | | M0001 | | | | | | | | | |
| 1414 | 4598 | 858 888 | Ŏ | 23 | 4146 | 4598 | | LDA | N | | | | | | | | | |
| 1415 | | | | | 4742 | 4547 | | ADD | SERAL | ** | | | | | | | | |
| | 4547 | 888 | | | 5001 | 4534 | • | STA4 | STOPT | 56 | | | | • | | | | |
| 1416 | 4700 | 888 | | | 83FB | 4758 | 2 | LDL | TEMP | | | | | | | | | |
| 1417 | 4758 | 888 | | | 4534 | 4736 | | LDX | S6 | COMP* | | | | | | | | |
| 1418 | 4534 | 888 | | | 4588 | 4192 | 56 | LDL# | 88888 | 88888 | X3. | TRANSFER RI | | | | | | |
| 1419 | 4192 | 886 | | | 8670 | 4747 | | LDA | R0001 | | | IF THE REM | | | | | | |
| 1420 | 4747 | 888 | | | 4150 | 4350 | | TEQ | | 1F | | ONTO THE CO | THEMM | S TAPE | 7. GC | TOMP | '17 UNI | LESS |
| 1421 | 4150 | 888 | 0 | 25 | 8672 | 4759 | | LDA | R0003 | | | DK FIELD WA | IS X. | IN WHI | CH CAS | E WE | GO TO | |
| 1422 | 4759 | 888 | Q | 82 | 4764 | 4350 | | TEO | | 1F | | E1 DIRECTLY | | | | | | |
| 1423 | 4764 | 888 | 0 | 25 | 8674 | 4382 | | LDA | R0005 | | | | | | | | | |
| 1424 | 4382 | 888 | | | 4788 | 4350 | | TEO | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 15 | | | | | | | | • |
| 1425 | 4788 | 888 | | | 8676 | 4392 | | LDA | R0007 | • | | | | | | | | |
| 1426 | 4392 | 858 | | | 4197 | 4350 | | TEO | 11000 | 1F | | | | | | | | |
| 1427 | 4197 | 888 | | | 8678 | 4365 | | LDA | R0009 | • * | | | | | | | | |
| 1428 | 4365 | 888 | | | 4582 | 4350 | | | | 1F | | | | | | | | |
| 1429 | 4350 | 398 | | | 4765 | | • | TEO | 2F | | | | | | | | | |
| 1430 | 4765 | 888 | | | | 4740 | 1 | LDL | | COMT* | | | | | | | | - |
| 1431 | 4782 | | | | 4782 | 4592 | | LDA | 00000 | 8F | | | | | | | | |
| 1432 | 4592 | 688 888 | | | 8678 | 8669 | | JMP | R0009 | R0000 | | | | | | | | |
| 1433 | | | | | 0989 | 4582 | 8 | TDC | Z0000 | 2F | | | | | | | | |
| | 4582 | 888 | | | BSFH | 4792 | 2 | LDA | RTAG | | | | | | | | | |
| 1434 | 4792 | 898 | | | 4397 | 4397 | | CLL | | | | | | | | | | |
| 1435 | 4397 | 888 | | | 4112 | 4189 | | TEO | FIN | -PRI | | | | | | | | |
| 1436 | 0989 | 888 | | | 0000 | 0000 | Z0000 | CON | 00000 | 00000 | | | | | | | | |
| 1437 | 0991 | 888 | | | 0000 | 0000 | Z0002 | CON | 00000 | 00000 | | | | | | | | |
| 1438 | 0993 | 886 | | | 0000 | 0000 | Z0004 | CON | 00000 | 00000 | | | | | | | | |
| 1439 | 0995 | 888 | | | 0000 | 0000 | Z0006 | CON | 00000 | 00000 | | | | | | | | |
| 1440 | 0997 | 988 | 0 | 00 | 0000 | 0000 | Z0008 | CON | 00000 | 00000 | | | | | | | | |
| 1441 | 0990 | 888 | | | 8389 | 3898 | Z0001 | CON | 88888 | 88888 | | | | | | | | |
| 1442 | 0992 | 888 | | | 8888 | 8888 | Z0003 | CON | 88888 | 88889 | | | | | | | | |
| 1443 | 0994 | 888 | | | 8888 | 8888 | Z0005 | CON | 88888 | 88888 | | | | | | | | |
| 1444 | 0996 | 888 | Õ | 88 | 8888 | 8888 | 20007 | CON | 8 888 8 | 88888 | | | | | | | | |
| 1445 | 0998 | 988 | | | 8888 | 8888 | Z0009 | CON | 88888 | 88888 | | | | | | | | |
| 1446 | | ~ · • | - | | | | | ннн | | 0-0-2 | | | | • | | | | |
| 1447 | 4701 | 388 | ٥ | 60 | 4146 | 0548 | S2 | STA | N | | X#- | COMPILE OI | OP | | | | | |
| 1448 | 0548 | 888 | | | 0550 | 0553 | ** ** | | 01000 | 00000 | 74.4 | COMPILE AN | | FOLLO | WED ay | THE | LINE | NUMBER - |
| | | | _ | | | | | 4000 | | * - * - * | | OWN ALL MIT | ~ · | , 4==- | U' | * # Think | - · · · · · · | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |

| 1449 | 0553 | 888 0 05 | 0555 | 4332 | | LDX | CMPL* | | AND TRANSFER THE SUBSECTION NAME + COLUMNS |
|--------------|------|----------------------|------|--------------|------------------|------------------|---------------|------|--|
| 1450 | 0555 | 888 0 30 | BIFG | J559 | | LDL LINE | | | 32-60. TO THE MUM CODE AREA AND THE COMMENTS |
| 1451 | 0559 | 888 0 05 | 0561 | 4736 | | FDX | COMP* | | TAPE ALSO. TOMP17. |
| 1452 | 0561 | 888 0 30 | 0563 | 4740 | | LDL | COMT* | | |
| 1453 | 0563 | 888 O 25 | BEAC | 9767 | | LDA MUMI | | | |
| 1454 | 0767 | 888 0 60 | BZAB | 0571 | | STA R84 | | | |
| 1455 | 0571 | 888 2 07 | 0006 | 0775 | | IIR4 0006 | | | |
| 1456 | 0775 | 888 0 60 | BEAC | 0579 | | STA MUMI | | | |
| 1457 | 0579 | 858 0 25 | 0581 | 0583 | | LDA | ef | | |
| 1458 | 0581 | 888 0 00 | 8670 | 8669 | | JMP ROOO1 | R0000 | | |
| 1459 | 0583 | 888 2 88 | 5194 | 0599 | 8 | TCD4 ¥9994 | | | |
| 1460 | 0599 | 888 0 70 | 0401 | 0404 | | ADD# 00000 | 20002 | | |
| 1461 | 0404 | 888 2 88 | 5196 | 0420 | | TCD4 #9996 | | | |
| 1462 | 0420 | 888 0 70 | 0422 | 0425 | | ADD# 00000 | 20 002 | | |
| 1463 | 0425 | 866 2 88 | 5198 | 4112 | | TCD4 #9998 | FIN | | |
| 1464 | 4374 | 858 0 30 | 0576 | 4505 | \$3 | LDL | BDK | X5. | COMPILE CONDITION |
| 1465 | 0576 | 858 0 25 | 8670 | 0580 | | LDA ROOOL | | | BLANK OUT THE DK FIELD. IF COLS 36-40 ARE |
| 1466 | 0580 | 898 0 35 | 0582 | 0584 | | ERS# 00000 | HHHHH | | BLANK THIS INDICATES A BRANCH TO THE NEXT |
| 1467 | 0584 | 88B 0 30 | 0586 | 0588 | | LDL# 00000 | 88888 | | SECTION SO AN OB OP IS SELECTED. OTHERWISE |
| 1468 | 0588 | 898 0 82 | 0591 | 0791 | | TEQ 1F | | | THE LAST OP COMPILED IS INCREASED BY 1. |
| 1469 | 0791 | 888 0 25 | B7AC | 0595 | | LDA MUML | | | IF IT WAS AN OI SELECT OP OG ELSE SELECT |
| 1470 | 0595 | 898 0 60 | BZAB | 0799 | | STA RB4 | | | OP 05. FINALLY COMPILE THE SELECTED OP |
| - 1471 | 0799 | 858 2 25 | 5201 | 0403 | | LDA4 W0001 | 60000 | | FOLLOWED BY THE CONDITION NAME. GO TO#X2 |
| 1472 | 0403 | 898 0 70 | 0405 | 0408 | | ADD# 01000 | 00000 | | TO SCAN THE REST OF THE REMARKS. |
| 1473 | 0408 | 898 2 60 | 5201 | 0603 | | STA4 W0001 | | | |
| 1474 | 0603 | 858 0 70 | 0605 | 0608 | | ADD | -FLO | | |
| 1475 | 0605 | 858 0 97 | 0000 | 0000 | | CON 97000 | 00000 | | |
| 1476 1477 | 0608 | 888 0 25 | 0410 | 0412 | -FLO | LDA | 2F | | |
| - 1478 | 0410 | 89B 0 06 | 0000 | 0000 | 8.001.0 | CON 06000 | 00000 | | |
| 1479 | 0609 | 888 0 25 888 0 05 | 0411 | 0412 0000 | & FLO | LDA | 2F | | |
| 1480 | 0411 | 888 0 25 | 0000 | | • | CON 05000 | 00000 | | |
| 1481 | 0593 | 858 0 08 | 0593 | 0412 | 1 | LDA CON 08000 | 2F 00000 | | |
| 1482 | 0412 | 888 0 05 | 0414 | 4332 | 2 | FDX | CMPL+ | | |
| 1483 | 0414 | 888 0 30 | BOAB | 0418 | €. | | CHARTA | | |
| 1484 | 0418 | 898 0 05 | 4362 | 4736 | | LDL DK LDX 55 | COMP* | | |
| 1485 | 4152 | 85B 0 05 | 0554 | 0556 | S 4 | LDX# 03000 | 00000 | | |
| 1486 | | | 0558 | 0560 | | | TERM# | YA. | FINISH PREV SECTION |
| 1487 | 0558 | 888 Q 25 | BAOB | 0562 | | LDA DK | IEMMY | AQ T | COMPILE 03 OP AND THEN PUT OUT A |
| 1488 | 0562 | 88B 0 37 | 0100 | 0566 | | SHL 0100 | | | SENTINEL ON THE COMMENTS TAPE. WRITE THE |
| 1489 | 0566 | 888 0 35 | 0768 | 0570 | | ERS# H0000 | H0000 | | STOP TABLE FOLLOWED BY ALL THE MUM CODE |
| 1490 | 0570 | 888 0 60 | B9AC | 0574 | | STA KEY | 1,000 | | ON THE CONTROL TAPE 6. THERE IS ROOM FOR |
| 1491 | 0574 | 888 0 31 | 0577 | 0577 | | CLL | | | ABOUT 1500 LINES OF MUM CODE. |
| 1492 | 0577 | 888 0 08 | 0000 | 0780 | | LIR1 0000 | -CLR | X7. | INITIALIZE |
| 1493 | 0780 | 888 Q 54 | 5001 | 0803 | -CLR | STL1 STOPT | 5 | | RECORD THE NEW KEY LETTER SKIP TO THE NEXT |
| 1494 | 0803 | 888 0 OG | 0002 | 0407 | | IIR1 0002 | | | PAGE ON THE ASSEMBLY LISTING. |
| 1495 | 0407 | 888 0 70 | 0409 | 0780 | | ADD | -CLR | | WRITE THIS LINE ON THE COMMENTS TAPE AND |
| 1496 | 0409 | 888 0 99 | 9800 | 0000 | | CON 99980 | 00000 | | RETURN TOMP17. |
| 1497 | 0781 | 888 0 50 | BEAC | 0585 | SCLR | STL MUMI | | | |
| 1498 | 0585 | 888 0 50 | BBAC | 0589 | | STL COMI | | | |
| | | | | | | | | | |

| - | | - | | | | | | |
|--------------|--------------|----------------------|--------------|--------------|-------|------------------|--------|---|
| 1499 | 0589 | 888 0 50 | 4742 | 0594 | | STL SERAL | | |
| 1500 | 0594 | 888 0 50 | 4146 | 0598 | | STL N | | |
| 1501 | 0598 | 888 0 30 | 0400 | 0402 | | LDL | PAGE+ | |
| 1502 | 0400 | 888 0 30 | 4112 | 4740 | | LDL FIN | COMT* | |
| 1503 | 0402 | 888 0 50 | 0804 | 0406 | PAGE+ | STL -SKIP | | G SKIP TO BEGINNING OF PAGE SUBROUTINE |
| 1504 | 0406 | 888 0 25 | 0808 | 0610 | | LDA# 00000 | 00066 | |
| 1505 | 0610 | 888 0 75 | BZAC | 0415 | | SUB LC | | |
| 1506 | 0415 | 888 0 31 | 0618 | 0618 | | CLL | | |
| 1507 | 0618 | 88B 0 50 | BZAC | 0622 | | STL LC | | |
| 1508 | 0622 | 898 0 37 | 0400 | 0429 | | SHL 0400 | **** | |
| 1509 | 0429 | 888 0 30 | 0431 | 0433 | | LDL# 00004 | 90000 | |
| 1510 | 0433 | 888 C 87 | 0436 | 0636 | | TGR | 15 | |
| 1511 | 0436 | 888 0 70 | 0438 | 0441 | | ADD# 00001 | 00000 | |
| 1512 | 0441 | 888 0 20 | 0443 | 0636 | | BUF | 1F | |
| 1513 | 0443 | 888 0 00 | 0040 | 0000 | _ | CON 00004 | 00000 | |
| 1514 | 0636 | 898 0 70 | 0638 | 000A | 1 | ADD | RA | |
| 1515 | 0638 | 856 0 16 | 0000 | 0804 | | PFD 0000 | -SKIP | |
| 1516 | 0805 | BBB 0 67 | 3333 | 000A | ASKIP | HLT 3333 | RA | |
| 1517 | 0560 | 888 0 50 | BOFB | 0564 | TERM* | STL EXIT | | G TERMINATE SECTION SUBROUTINE. |
| 1518 | 0564 | 888 0 31 | 0967 | 0967 | | CLL | | G RL 15 THE EXIT. RX IS THE 03 OR 04 TO COMPILE |
| 1519 1520 | 0967 0771 | 856 0 25 | BEAC | 0771 | | LDA MUMI | | G THIS SUBROUTINE DOES WHAT IS DESCRIBED |
| 1521 | 0774 | 898 0 82 | BOFB | 0774 | | TEG EXIT | | G UNDER SUBSECTION X6. |
| 1522 | 0778 | 858 0 30 | 000C | 0778 | | LDL RX | COMPA | |
| 1523 | 0980 | 888 0 05 | BBAC | 4736 0784 | | LDX | COMP* | |
| 1524 | 0784 | | | | | LDA COMI | 00000 | |
| 1525 | 0788 | 858 0 30 858 0 70 | 0786 0590 | 0788 | | LDL# 99999 | 99999 | |
| 1526 | 0590 | 888 0 50 | 3401 | 000A 3003 | | ADD STL CMTS1 | RA | |
| 1527 | 3003 | 888 0 05 | 3005 | 0607 | | LDX 2F | | |
| 1528 | 0607 | 858 0 30 | 0809 | 8919 | | LDL | TSUB* | |
| 1529 | 0809 | 888 Q C6 | 3400 | 3005 | | TBL COMTS | 2F | |
| 1530 | 3005 | 355 0 H2 | 0700 | 0822 | 2 | TWR OTAP3 | | - |
| 1531 | 0822 | 888 0 08 | 0000 | 0625 | - | LIR1 0000 | 4F | |
| 1532 | 0532 | 888 0 0G | 0200 | 0536 | 1 | IIR1 0200 | *** | |
| 1533 | 0536 | 888 0 30 | BEAC | 0540 | | LDL MUMI | | |
| 1534 | 0540 | 888 0 87 | 0543 | 0625 | | TGR 3F | 4F | |
| 1535 | 0625 | 888 0 05 | 0427 | 0629 | 4 | LDX 2F | | |
| 1536 | 0629 | 888 0 30 | 0631 | 9919 | · | LDL | TSUB# | |
| 1537 | 0631 | 888 0 CF | 5000 | 0427 | | TBL1 W9800 | 2F | |
| 1538 | 0427 | 888 0 H2 | 0600 | 0532 | 2 | TWR OTAP2 | 18 | |
| 1539 | 0543 | 888 0 25 | 0545 | 0547 | 3 | LDA# 99999 | 99999 | |
| 1540 | 0547 | 888 0 64 | 5199 | 0601 | | STA1 W9999 | | |
| 1541 | 0601 | 888 0 05 | 3203 | 3205 | | LDX 2F | | |
| 1542 | 3205 | 888 0 30 | 0807 | 8919 | | LDL | TSUB * | |
| 1543 | 0807 | 898 0 CF | 5000 | 3203 | | TBL1 W9800 | 2F | |
| 1544 | 3203 | 888 0 H2 | 9600 | 80F8 | 2 | TWR OTAP2 | EXIT | |
| 1545 | 0745 | 888 0 G2 | 0300 | 0762 | SOP | TRD ITAP1 | | B. BEGINNING OF ASSEMBLY |
| 1546 | 0762 | 888 0 C7 | 3167 | 0565 | | TBT | 1F | 31. CHECK INPUT TAPE |
| 1547 | 3167 | 888 0 67 | 4444 | 0745 | | HLT 4444 | BOP | HOLD IF INPUT TAPE ISNT READY HALT AND RETURN |
| 1548 | 0565 | 888 0 25 | 4223 | 0975 | 1, | LDA TCONI | | To#B1. |
| | | | | | | - - | | |

| 1549 | 0975 | 888 0 60 | B 8F G | 0779 | | STA | TCONT | | GOS | |
|------|------|-----------|---------------|------|-------|------|------------|----------------|-----|--|
| 1550 | 0779 | 898 0 25 | 0745 | 0747 | | LDA | BOP | | | READ BLOCK |
| 1551 | 0747 | 888 0 60 | 89FG | 0551 | | STA | LTAPE | | 24 | READ IN FIRST BLOCK INTO INPUT BUFFER |
| 1552 | 0551 | 888 0 05 | | | | | | | | METRI IN LINE, BEACK THIS THESE BOLIEN |
| | | | 0753 | 0755 | | LDX | 1F | | | |
| 1553 | 0755 | 858 0 30 | 0000 | 8919 | | LDL | RX. | TSUB* | | CALL A COM MARKET TO MAKE A CAMPAND COMM TAXABLE COMM |
| 1554 | 0753 | 888 0 G2 | 0300 | 0770 | 1 | TRD | ITAPL | | | UNLOAD FIRST TAPE BUFFER AND INITIATE |
| 1555 | 0770 | 888 0 25 | 4624 | 0776 | | LDA | TCONZ | | | READING SECOND BLOCK. THE INPUT TAPE IS |
| 1556 | 0776 | 888 0 60 | Bafg | 3180 | | STA | TCONT | | | ALWAYS READING ONE BLOCK AHEAD. THERE MUST |
| 1557 | | | | | | | | | X | THEREFORE BE AN EXTRA HASH BLOCK AFTER THE |
| 1558 | | | | | | | | | X | ENDING SENTINEL. |
| 1559 | | | | | | | | | X | EACH TAPE BLOCK CONTAINS 10 LINES. |
| 1560 | 3180 | 898 Q 30 | 0782 | 984 | | LDL | | 1F | | · · |
| 1561 | 0782 | 888 1 00 | 0000 | 0001 | | CONI | 00000 | 00001 | | |
| 1562 | 0984 | 888 0 50 | BIFG | 0988 | 1 | STL | LINE | • • • | | |
| 1563 | 0988 | 888 0 31 | 3191 | 3191 | | CLL | *** | | | |
| 1564 | 3191 | 888 0 50 | B7FG | 0795 | | STL | TAPEI | 1F | .re | INITIALIZE |
| 1565 | BPAH | 888 0 08 | 0999 | 0671 | BOPI | LIRI | | 4" | 0,5 | |
| 1566 | | | | | BVF 4 | | | | | |
| 1567 | 0671 | 988 0 31 | 0474 | 0474 | 2 | CLL | 2F | | G | CLEAR SYMBOL TABLE IN MULTIPLE ASSEMBLY. |
| 1568 | 0474 | 888 0 29 | 1000 | 0602 | 2 | | STAB | | ų. | CTEME STUDAT INDEE TH MATTER WASTERDEL! |
| | 0602 | 888 0 70 | 0604 | 3007 | | ADD | 10000 | -BOPR | | |
| 1569 | 0604 | 888 0 12 | 0000 | 0000 | | CON | 12000 | 00000 | | |
| 1570 | 3007 | 888 0 54 | 1000 | 3008 | -BOPR | | STAB | abopr | | |
| 1571 | 3008 | 888 0 OG | 9999 | 0612 | &BOPR | IIR1 | | | | |
| 1572 | 0615 | 888 0 82 | 0795 | 0474 | | TEQ | 1F | 28 | | |
| 1573 | 0795 | 888 0 50 | BJFC | 3199 | 1 | STL | CORE | | | SET LOWER CORE AVAILABLE |
| 1574 | 3199 | 888 0 50 | B4FC | 3603 | | STL | BLANK | | | SET BLANK ADDRESS UNDEFINED |
| 1575 | 3603 | 888 0 50 | 87FH | 3207 | | STL | FTAG | | | SET FLO MODE OFF |
| 1576 | 3207 | 898 0 50 | BSAC | 0611 | | STL | ACCUM | | | |
| 1577 | 0611 | 888 0 50 | 86AC | 0615 | | STL | MUMI | | | |
| 1578 | 0615 | 88B 0 50 | BZAC | 0419 | | STL | LC | | | SET LINE COUNTERS TO ZERO |
| 1579 | 0419 | 898 0 50 | BJAC | 0423 | | STL | LINEO | | | |
| 1580 | 0423 | 898 0 08 | 0000 | 0626 | | | 0000 | -82 | | |
| 1581 | 0626 | BBB 0 54 | 8649 | 0831 | -BP | | 10000 | 5.00 | | SET FORWARD AND BACKWARD LOCAL TABLES |
| 1582 | 0831 | 888 0 0G | 0001 | 0435 | J, | IIRI | | | | (I AND J TABLES) TO UNDEFINED. |
| 1583 | 0435 | 888 0 70 | 0437 | 0626 | | ADD | 000 | -8p | | 11 MAD O IMPERSY ID OUTS. THESE |
| 1584 | 0437 | 858 0 99 | 9980 | 0000 | | | 99998 | 0 000 0 | | |
| 1585 | 0627 | | - | | 100 | CON | 77770 | | | |
| | | 68B () 25 | 0829 | 3031 | &BP | LDA | | 8 F | | |
| 1586 | 0829 | 888 0 00 | 8616 | 8417 | _ | JMP | D0199 | 00000 | | |
| 1587 | 3031 | 888 0 80 | 7800 | 0446 | 8 | TDC | Y0000 | | | |
| 1588 | 0446 | 888 0 88 | 4800 | 0461 | | TCD | 70000 | | | |
| 1589 | 0461 | 888 0 30 | 0463 | 0465 | | LDL# | | 99999 | | SET DRUM STATUS SO THAT OOOL TO 4999 |
| 1590 | 0465 | 888 0 50 | 8418 | 0469 | | STL | 00001 | | | ARE AVAILABLE |
| 1591 | 0469 | 888 0 08 | 0001 | 0472 | | LIRI | 0001 | | | |
| 1592 | 0472 | 888 0 30 | 0674 | 9676 | | LDL | | -BP 1 | | |
| 1593 | 0674 | 888 0 GG | 6669 | 9999 | | CON | GGGGG | 99999 | | |
| 1594 | 0676 | 888 0 54 | 8418 | 0481 | -8P1 | STLI | 00001 | | | |
| 1595 | 0481 | 858 0 0G | 0001 | 0485 | | IIRI | 0001 | | | |
| 1596 | 0485 | 888 0 70 | 0487 | 0676 | | ADD | | -8p1 | | |
| 1597 | 0487 | 888 0 99 | 9800 | 0000 | | CON | 99980 | 00000 | | |
| 1598 | 0677 | 888 0 30 | 0479 | 0681 | &BP1 | | 00000 | 00888 | | SET HHH BLANK. |
| | , | 4 24 | 477 | 444. | #W. # | **** | 30044 | 0.4500 | | च्याच्या । प्राप्ताः अनुवाद्यम् । च्याच्याच्याच्याच्याच्याच्याच्याच्याच्या |

| 1599 | 0681 | 888 | 0 | 50 | 86FH | 0685 | | STL | HTAG | |
|--------------|--------------|------------|---|-----------|--------------|--------------|-------|------|-------|----------------|
| 1600 | 0685 | 888 | 0 | 30 | 4056 | 0508 | | LDL | ONSW | |
| 1601 | 0508 | 886 | 0 | 50 | 4439 | 0541 | | STL | SWICH | |
| 1602 | 0541 | 888 | 0 | 30 | 4201 | 0953 | | LDL | STRT | |
| 1603 | 0953 | 886 | 0 | 50 | 4200 | 0802 | | STL | START | |
| 1604 | 0802 | 888 | 0 | 25 | 4189 | 0641 | | LDA | -PRI | WRITE |
| 1605 | 0641 | 858 | 0 | 60 | 8901 | 0445 | WRITE | STA | -OEX | |
| 1606 | 0445 | 888 | 0 | 26 | 8902 | 8902 | | CLA | &OEX | |
| 1607 | | | | | | | | | | |
| 1608 | BTAG | 888 | 1 | 08 | 0002 | 0669 | END | LIRJ | 0002 | |
| 1609 | 0669 | 888 | 0 | 05 | 0871 | 0673 | | LDX | 2F | |
| 1610 | 0673 | 888 | 0 | 30 | 0675 | 9810 | | LDL | | FIND* |
| 1611 | 0675 | 888 | 0 | 67 | AOOO | 0871 | _ | HLT | RA | 2F |
| 1612 | 0871 | 888 | 0 | 20 | 0873 | 0875 | 2 | BUF | 1F | |
| 1613 | 0875 | 888 | 0 | 05 | 0877 | 0679 | | LDX | 25 | A T T # |
| 1614 | 0679 | 888 | 0 | 30 | 0881 | 8900 | | LDL | | OTPT# |
| 1615 | 0881 | 858 | 0 | 25 | BSAC | 0687 | | LDA | ACCUM | |
| 1616 | 0687 | 888 | 0 | 60 | B6FB | 0491 | | STA | ERROR | |
| 1617 | 0491 | 888 | 0 | 25 | 0493 | 0495 | | LDA | 3F | |
| 1618 | 0495 | 888 | 0 | 60 | 4200 | 0502 | | STA | START | wa • T# |
| 1619 | 0502 | 888 | 0 | 25 | BJAG | 0641 | • | LDA | PSUDX | WRITE 0000 |
| 1620 | 0873 | 888 | 0 | 67 | НННН | 0000 0402 | 1 3 | HLT | НННН | PAGE* |
| 1621 | 0493 | 858 | 0 | 30 | 0695 | | , | LDL | | |
| 1622 1623 | 0695 0497 | 888 | 0 | 30 05 | 0497 0499 | 0402 0501 | | LDX# | 04000 | PAGE* 00000 |
| 1624 | 0501 | 868 888 | a | 30 | 0503 | 0560 | | FDF | 04000 | TERM# |
| 1625 | 0503 | 888 | 0 | | BOAH | 0703 | | HLT | BOPI | BERTHIN TO |
| 1626 | 0703 | 888 | Ö | | 0500 | 0500 | | TRW | OTAPI | |
| 1627 | 0500 | 858 | Ö | 31 | 0903 | 0903 | | CLL | 01A | |
| 1628 | 0903 | 888 | ō | 25 | 87FH | 0507 | | LDA | FTAG | |
| 1629 | 0507 | 886 | ā | 82 | 0510 | 0710 | | TEQ | 15 | |
| 1630 | 0710 | 888 | ō | F2 | 0600 | 0600 | | TRW | OTAP2 | |
| 1631 | 0600 | 888 | ā | | 0700 | 0700 | | TRW | OTAP3 | |
| 1632 | 0700 | 888 | ō | | 0400 | 0517 | | TRD | 0400 | |
| 1633 | 0517 | 888 | - | F6 | B000 | 8000 | | TBU | 8000 | 8000 |
| 1634 | 0510 | 888 | ٥ | | 0500 | 0527 | 1 | TRD | OTAP1 | |
| 1635 | 0527 | 888 | 0 | C7 | 0510 | 0530 | | TBT | 18 | |
| 1636 | 0530 | 888 | | | 7800 | 7801 | | TBU | Y0000 | A0001 |
| 1637 | 0877 | 888 | _ | - | 0000 | 7905 | 2 | JMP | 0000 | A0102 |
| 1638 | HAES | 888 | 0 | 30 | 0670 | 0402 | PAT | LDL | | PAGE* |
| 1639 | 0670 | 888 | | | 3073 | 3073 | | CLX | | |
| 1640 | 3073 | 856 | | 63 | 3073 | 0476 | | ZAP | | |
| 1641 | 0476 | 888 | | 60 | 0200 | 3002 | | STA | 0200 | |
| 1642 | 3002 | 358 | | 65 | 0223 | 0825 | | STX | 0223 | |
| 1643 | 0825 | 888 | | 60 | 0262 | 0664 | | STA | 0262 | |
| 1644 | 0664 | 858 | | | 0267 | 0869 | | STX | 0267 | |
| 1645 | 0869 | 888 | | 60 | 0294 | 0496 | | STA | 0294 | |
| 1646 | 0496 | 898 | | 65 | 0299 | 0701 | | STX | 0299 | |
| 1647 | 0701 | 858 | | 60 | 0303 | 0505 | | STA | 0303 | |
| 1648 | 0505 | 888 | 0 | 65 | 0308 | 0910 | | STX | 0308 | |

- 84. OUTPUT GETS LOADER
 WRITE LOADING ROUTINE ON OUTPUT TAPE.
 NEITHER TAPE IS EVER REWOUND BY THE PROGRAM.
- X WE ARE NOW READY TO TAKE OFF GOING TOHEL.
- Z. ENDING OF ASSEMBLY.
- Z1. FIND* M. FIND M. IF UNDEFINED. HALT AND THE OPERATOR IS SUPPOSED TO FILL RA WITH THE RIGHT THING.
- Z2. ASSEMBLE TRANSFER
 ASSEMBLE HLT HHHH MLOC INTO LOCATION 0105
 WHICH WILL CAUSE THE LOADING TO STOP WITH
 THIS INSTRUCTION.
- Z3. CLEAN OUTPUT BUFFER.

 WRITE THE LAST BUFFER LOAD ON THE OUTPUT
 TAPE. PRINT THE END LINE AND THE ERROR
 INDICATION ON THIS LINE IS BLANK IF AND ONLY
 IF NO ERRORS OCCURRED DURING ASSEMBLY.
- Z4. EJECT PAPER SKIP THE PRINTER PAPER ABOUT 2 PAGES AHEAD.
- Z5. FINISH FLO FINISH PROCESSING THE LAST SECTION OF FLOW-CHART, IF ANY (SEE X6. EXCEPT COMPILE 04 INSTEAD OF 03 0P).
- Z6. HALT THE COMPUTER. PASS 2 IS FINISHED.
- Z7. FLOWCHARTING NO. IF NOT FLOWCHARTING . #LOAD THE ASSEMBLED

YES: PROGRAM. IF FLOWCHARTING. GO ON TOWPASS3.

| | 1649 | 0910 | 888 | 60 | 0325 | 2727 | | STA 0325 | |
|---|------|------|-------|----|------|------|------|-------------------------|--------------|
| | 1650 | 0727 | 888 0 | 65 | 0330 | 0732 | | STX 0330 | |
| | 1651 | 0732 | _ | 60 | 0334 | 0736 | | STA 0334 | |
| | 1652 | 0736 | | 65 | 0339 | 0741 | | STX 0339 | |
| | 1653 | 0741 | 888 | | 0365 | 3367 | | 5TA 0365 | |
| | 1654 | 3367 | 38B 0 | | 0370 | 0772 | | 5TX 0370 | |
| | 1655 | 0772 | 888 0 | | 0378 | 3380 | | STA 0378 | |
| | 1656 | 3380 | 888 0 | | 0383 | 0785 | | STX 03/8 | |
| | 1657 | 0785 | 888 0 | | 9999 | 3188 | | | |
| | 1658 | 3188 | 388 | | 0001 | 0592 | -PAT | LIRI 9999 | -PAT |
| | 1659 | 0592 | 858 | | 0794 | 0596 | 7501 | IIR1 0001 LDL# 00005 | 00000 |
| | 1660 | 0596 | 858 | | 3399 | | | | 00000 |
| | 1661 | 3799 | | | | 3799 | | TEG 1F | |
| | 1662 | | - | | 0218 | 0620 | | STA 0218 | |
| | | 0620 | 888 (| | 8418 | 3025 | | LDA1 D0001 | 119100 |
| | 1663 | 3025 | 888 0 | | 0827 | 8920 | | LDX | UNDG* |
| | 1664 | 0827 | 888 0 | | 0281 | 0683 | | STX 0281 | |
| | 1665 | 0683 | 888 0 | | 0286 | 0688 | | STA 0286 | |
| | 1666 | 0688 | 898 0 | | 8468 | 0693 | | LDA1 D0051 | 4 18 In @ 4. |
| | 1667 | 0693 | 888 0 | | 0895 | 3920 | | LDX | UNDG* |
| | 1668 | 0895 | | 65 | 0250 | 0652 | | STX 0250 | |
| | 1669 | 0652 | | 60 | 0255 | 0657 | | STA 0255 | |
| | 1670 | 0657 | 888 0 | | 8518 | 0662 | | LDA1 00101 | |
| | 1671 | 0662 | 888 | | 0864 | 8920 | | LDX | UNDG* |
| | 1672 | 0864 | 888 0 | | 0241 | 0643 | | STX 0241 | |
| | 1673 | 0643 | | 60 | 0246 | 0448 | | STA 0246 | |
| | 1674 | 0448 | 888 0 | | 8568 | 0453 | | LDA1 D0151 | |
| | 1675 | 0453 | 888 0 | | 0455 | 8920 | | LDX | UNDG# |
| | 1676 | 0455 | | 65 | 0209 | 0811 | | STX 0209 | |
| | 1677 | 0811 | 898 0 | | 0214 | 0416 | | STA 0214 | |
| - | | 0416 | 888 0 | - | 0201 | 3188 | | PRN 0201 | -PAT |
| | 1679 | 3189 | 888 0 | | 3333 | AODO | SPAT | HLT 3333 | RA |
| | 1680 | 3399 | 898 0 | | 0016 | 4189 | 1 | PFD 0016 | -PRI |
| | 1681 | BBAG | 888 0 | | 8706 | 0970 | NEW | LDA A | |
| | 1682 | 0970 | 898 1 | | 0000 | 0573 | | LIR3 0000 | |
| | 1683 | 0573 | 858 0 | | 9999 | 0976 | | LIR1 9999 | |
| | 1684 | 0976 | 888 0 | | 0978 | 3780 | | LDX 2F | |
| | 1685 | 3780 | 888 0 | | 0982 | 8810 | | LDL 1F | FIND* |
| | 1686 | 0978 | 888 0 | | BSFC | J182 | 2 | STA ALOC | |
| | 1687 | 3182 | 888 0 | | 3184 | 4530 | | LDL | PSIGN |
| | 1688 | 3184 | 888 0 | | 0100 | 3388 | | SHR 0100 | |
| | 1689 | 3388 | 888 0 | | 84FG | 0792 | | LDL MC | |
| | 1690 | 0792 | 888 0 | 90 | 000C | 0796 | | SML RX | |
| | 1691 | 0796 | 888 0 | | BSFC | 0800 | | LDA ALOC | |
| | 1692 | 0800 | 888 0 | 37 | 0400 | 3607 | | SHL 0400 | |
| | 1693 | 3607 | 888 0 | 70 | 3009 | 000A | | ADD | RA |
| | 1694 | 3009 | 888 0 | 50 | 0000 | BJAG | | STL 0000 | PSUDX |
| | 1695 | 0982 | 888 0 | 25 | 8706 | 0986 | 1 | LDA A | |
| | 1696 | 0986 | 888 0 | | 0789 | 0789 | | CLX | |
| | 1697 | 0789 | 888 0 | | 1000 | 3202 | | STX1 STAB | |
| - | 1698 | 3202 | 888 0 | | 0200 | 3807 | | SHR 0200 | |
| | | | _ | | | / | | → | |

G SPECIAL SECRET OP NEW
G FIND A. IF UNDEFINED PUT IT AS OP IN
G SYMBOL TABLE WITH EQUIVALENT IN M AND C.
G IF DEFINED PUT CONTENTS OF M AND C INTO
G THE GADAAD PROGRAM IN THIS LOCATION.

| | | | - | | | | | | | |
|------|------|-----|---|----|------|------|-----------|------|-------------|----------------|
| 1699 | 3807 | 888 | ٥ | 20 | 3209 | 3011 | | BUF# | 88000 | 88000 |
| 1700 | 3011 | 388 | 0 | 05 | 0413 | 0815 | | LDX | 1F | |
| 1701 | 0815 | 888 | O | 77 | 0815 | 0518 | | ATL | | |
| 1702 | 0818 | 888 | 0 | 25 | 0000 | 8712 | | LDA | RX | SRCH* |
| 1703 | 0413 | 888 | a | 30 | 3015 | 4530 | 1 | LDL | | PSIGN |
| 1704 | 3015 | 888 | ā | 32 | 0100 | 0619 | • | SHR | 0100 | , 0, 4, 4 |
| 1705 | 0619 | 888 | ă | 30 | 84FG | 0623 | | LDL | MC | |
| 1706 | 0623 | 888 | ă | 90 | 0000 | 3027 | | | | |
| | | | _ | - | | | | SML | RX | 55:15:4 |
| 1707 | 3027 | 858 | 0 | 54 | 2000 | BACE | . | STL1 | ETAB | PSUDX |
| 1708 | 8736 | 888 | 0 | 60 | 83F8 | 0740 | ERR1* | STA | TEMP | |
| 1709 | 0740 | 888 | 0 | 65 | 84F8 | 0544 | | STX | TEMP! | |
| 1710 | 0544 | 88B | 1 | QG | 0001 | 0748 | | IIRJ | 0001 | |
| 1711 | 0748 | 898 | a | 06 | 0751 | 0751 | | CLX | ~ - | |
| 1712 | 0751 | 888 | Q | 32 | 0400 | 9758 | | SHR | 0400 | |
| 1713 | 0758 | 888 | ā | 05 | 0760 | 8760 | | LDX | 1F | ERR2+ |
| 1714 | 8760 | 898 | ā | 20 | 86F8 | 0766 | ERR2# | BUF | ERROR | |
| 1715 | 0766 | 888 | ā | 37 | 0100 | 3170 | | SHL | 0100 | |
| 1716 | 3170 | 888 | ă | 60 | | | | | | |
| | | | - | | BAFB | 0974 | | STA | ERROR | |
| 1717 | 0974 | 888 | ٥ | 60 | 85AC | 000C | | STA | ACCUM | RX |
| 1718 | 0760 | 888 | 1 | OG | 9999 | 0764 | 1 | IIR3 | 9999 | |
| 1719 | 0764 | 888 | 0 | 25 | 83F8 | 0968 | | LDA | TEMP | |
| 1720 | 0968 | 888 | 0 | 05 | 84F5 | 8000 | | LDX | TEMPL | RL |
| | | | | | | | | - | | |
| | | | | | | | | | | |

ERROR SUBROUTINE

ACCUMULATES IN ERROR THE ERROR CODES

FOR A LINE.

ERR1*: CODE IS RB3+1. INDICATING THE FIELD

EXIT IS IN RL.

G ERR2+: CODE IS IN RA+ EXIT IS IN RX.

| IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED. | IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE | WRITTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER | SAME TO SPERRY RAND CORPORATION, UPON DEMAND |
|--|---|--|--|

| | ~ · | | | | |
|------------|------------|------------|------------|------------|------------|
| 0000044044 | ₩5- | 0055544044 | 00000000 | 0000544044 | 0027544044 |
| 0000544044 | *** | 0055544044 | 0000010000 | 0000544044 | 0000544044 |
| 0000000044 | • | 0000544044 | 000020000 | 0005544044 | 0035544044 |
| 0000000004 | A | 0005544044 | 0000030000 | 0000044044 | 0000044044 |
| 0000044044 | 48 | 0055544044 | 0000040000 | 0055544044 | 0005544044 |
| 0000000044 | | 0005544044 | 0000050000 | 0005544044 | 0000544044 |
| 0005544044 | •. | 0055544044 | 000060000 | 0055544044 | 0005544044 |
| 000000000 | | 0000544044 | 0000070000 | 0005544044 | 0055544044 |
| 0000004044 | * | 0005544044 | 000080000 | 0005544044 | 0000544044 |
| 0000000044 | * | 0055544044 | 0000090000 | 0055544044 | 0005544044 |
| 0000544044 | | 0055544044 | 0000100000 | 000044044 | 0000544044 |
| 0000004044 | | 0005544044 | 0000110000 | 0055544044 | 0005544044 |
| 0000544044 | | 0000544044 | 0000120000 | 0055544044 | 0000544044 |
| 0005544044 | | 0005544044 | 0000130000 | 0035544044 | 0005544044 |
| 0005544044 | * | 0000044044 | 0000140000 | 0055544044 | 0000544044 |
| 0000004044 | | 0005544044 | 0000150000 | 0055544044 | 0005544044 |
| 0005544044 | | 0005544044 | 0000160000 | 0055544044 | 0000544044 |
| 0055544044 | | 0055544044 | 0000170000 | 0005544044 | 000000044 |
| 0000044044 | -49% | 0000544044 | 0000180000 | 0055544044 | 0000044044 |
| 0000544044 | - ** | 0000044044 | 0000190000 | 0055544044 | 0055544044 |
| 0000544044 | | 0000544044 | 0000200000 | 0055544644 | 000004044 |
| 0055544044 | | 0000044044 | 0000210000 | 0055544044 | 0000544044 |
| 0000044044 | ~ | 0005544044 | 0000220000 | 0055544044 | 0000544044 |
| 0000544044 | 2.4 | 0000004044 | 0000230000 | 0055544044 | 0005544044 |
| 0055544044 | *** | 0000544044 | 0000240000 | 0055544044 | 0000044044 |
| 0000004044 | | 0000044044 | 0000250000 | 0055544044 | 0000044044 |
| 0050544044 | | 0000544044 | 0000260000 | 0055544044 | 0000044044 |
| 0000004044 | | 0000044044 | 0000270000 | 0000544044 | 0005544044 |
| 0055544044 | | 0005544044 | 0000280000 | 0055544044 | 0000044044 |
| 0000044044 | | 0000544044 | 0000290000 | 0055544044 | 0000544044 |
| 0055544044 | | 0005544044 | 0000300000 | 0005544044 | 000000004 |
| 0000004044 | | 0000044044 | 0000310000 | 0055544044 | 0000544044 |
| 0055544044 | | 0005544044 | 0000320000 | 0000544044 | 000004044 |
| 0005544044 | | 0000544044 | 0000330000 | 0055544044 | 0005544044 |
| 0055544044 | | 0005544044 | 0000340000 | 0055544044 | 0000004044 |
| 0005544044 | | 0000544044 | 0000350000 | 0055544044 | 0000544044 |
| 0000544044 | | 0005544044 | 0000360000 | 0000544044 | 0000044044 |
| 0005544044 | | 0000544044 | 0000370000 | 0055544044 | 0055544044 |
| 0000544044 | | 0000544044 | 0000380000 | 0055544044 | 000000044 |
| 0055544044 | | 0055544044 | 0000390000 | 0055544044 | 0000004044 |
| 0055544044 | | 0055544044 | 0000400000 | 0000544044 | 0005044044 |
| 0000544044 | | 0005544044 | 0000410000 | 0000544044 | 000004044 |
| 0055544044 | | 0055544044 | 0000420000 | 0055544044 | 0000044044 |
| 0000544044 | | 0000544044 | 0000430000 | 0005544044 | 0005044044 |
| 0055544044 | | 0055544044 | 0000440000 | 0005544044 | 0002044044 |
| 0005544044 | | 0000044044 | 0000450000 | 0000544044 | 0000044044 |
| 0005544044 | | 0005544044 | 0000460000 | 0055544044 | 0000044044 |
| 0055544044 | | 0005544044 | 0000470000 | 0000544044 | 0077044044 |
| 0005544044 | | 0055544044 | 0000480000 | 0000544044 | 0007044044 |
| 0055544044 | | 0005544044 | 0000490000 | 0055544044 | 222200004 |
| | | | | | |

| 17 | 22 | _ | | | | | BLR | 0000 | 4999 | | G | SIMPLE OBJECT PROGRAM LOADING ROUTINE |
|-----|-----|--------|----------|------|------|-------|------|-------|---------|-----|---|---|
| | 23 | | | | | | | | | | _ | |
| | | | | | | | BLA | Y0003 | A0166 | | G | GOES INTO BAND 7800+ THE ODD LOCATIONS. |
| | 24 | | 202 - 48 | | | | BLR | A0101 | A0102 (| 204 | | |
| | 25 | 0000 | 99B Q 67 | 0000 | 0000 | 0000 | HLT | | * | | | |
| | 26 | 7801 | 888 0 25 | 7803 | 7805 | Y0001 | LDA | 1F | | | | |
| 17 | 27 | 7805 | 88B 0 60 | 7902 | 7907 | | STA | Y0102 | 2F | | | |
| 17 | 28 | 7907 | 888 0 G2 | 0500 | 7925 | 2 | TRD | OTAPI | | | | |
| 17 | 29 | 7925 | 888 0 C7 | 7931 | 7925 | | TBT | | * | | | |
| | 30 | 7931 | 888 0 87 | 7935 | 7937 | | TGR | | 3F | | | |
| | 31 | 7935 | 898 0 67 | 7935 | 7907 | | HLT | | 28 | | | |
| | 32 | 7937 | 888 0 F6 | 8600 | 7901 | 3 | TBU | 8600 | A0101 | | | |
| | 33 | 7803 | 898 0 67 | 7803 | 7937 | 1 | HLT | 3000 | 38 | | | |
| | 34 | | | | | Y0101 | | 0000 | Y0105 | | | |
| | | 7901 | 888 0 08 | 0000 | 7905 | | LIRI | 0000 | 10102 | | | |
| | 735 | 7905 | 888 0 34 | 8601 | 7807 | Y0105 | LDL1 | 8601 | | | | |
| | 736 | 7807 | 888 0 29 | 8603 | 7809 | | LDAI | | | | | |
| | 37 | 7809 | 888 0 37 | 0400 | 7817 | | SHL | 0400 | | | | |
| | 38 | 7817 | 888 0 90 | AOOO | 7821 | | SHL | RA | | | | |
| | 39 | 7821 | 888 0 35 | 7823 | 7825 | | ERS# | ООННН | H0000 | | | |
| 17 | 40 | 7825 | 888 0 20 | 7827 | AOOO | | BUF | | RA | | | |
| 17 | 41 | 7827 | 888 0 50 | 0000 | 7811 | | STL | 0000 | | | | |
| 17 | 42 | 7811 | 888 0 0G | 0004 | 7815 | | IIR1 | 0004 | | | | |
| | 43 | 7815 | 888 0 30 | 7819 | 7829 | | LDL# | | 00000 | | | |
| | 44 | 7829 | 888 0 82 | 7907 | 7905 | | TEQ | 28 | Y0105 | | | |
| | 745 | 1 W. 7 | 200 A GE | 1741 | 7703 | | | | 10703 | | | |
| - 1 | 73 | | | | | | END | BOP | | | | |

L J **Remington. Trand. Univa** Division of sperry rand corporation PHILADELPHIA, PA.

IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT. THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THERIN CONTAINED. IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS. FOR ANY PURPOSE, EXCEPT WITH THE WITTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION, UPON DEMAND.

REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED. IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS. FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION, UPON DEMAND.

| 0000 | | FLO | | 2. | GADAAD ASSEMBLER PASS 2. |
|----------------------|---------|------------|-------|----|---|
| 0001 | | F-C0 | | €. | MADAM MACHINELL LKAO E. |
| 0017 | | 8LR 0000 | 0399 | | |
| 0018 | HASS | NEW1 00001 | 00000 | | CAUSES ASSEMBLY INTO BOUA - 899F AREA. |
| 0019 | 50000 | COR 0201 | 0000 | | INPUT BUFFER |
| 0020 | 50000 | COR 0201 | | | INPUT BUFFER |
| 0021 | 70000 | BLR 4800 | 4999 | | OUTPUT BUFFER |
| 0022 | 80000 | COR 0014 | 7777 | | BLA.BLR CONTROL |
| 0023 | C0000 | BLR 4030 | 4035 | | C ADDRESS CONTROL |
| 0024 | 00000 | COR 0202 | 4022 | | DRUM AVAILABILITY TABLE |
| 0025 | E0000 | COR 0006 | | | |
| 0026 | F0000 | COR 0024 | | | DEFN* CONTROL Fare* Control |
| 0027 | | | | | · · |
| | 10000 | COR 0010 | | | FORWARD LOCAL TABLE |
| 0028 | J0000 | COR 0010 | #A16 | | BACKWARD LOCAL TABLE |
| | L0000 | BLR 4010 | 4015 | | A ADDRESS CONTROL |
| 0030 | M0000 | BLR 4020 | 4025 | | M ADDRESS CONTROL |
| 0031 | 00000 | BLR 4000 | 4009 | | INDEX REGISTER CODES |
| 0032 | R0000 | COR 0011 | | | REMARKS |
| 0033 | U0000 | COR 0004 | | | H FIELDS |
| 0034 | V0000 | COR 0004 | | | H FIELD CONTROL |
| 0035 | W0000 | EQU 5200 | | | |
| 0036 | X0000 | COR 0006 | | | EQU CONTROL |
| 0037 | Y0000 | EQU 7800 | | | BAND FOR LOADING ROUTINE |
| 0038 | Z0000 | BLR 0989 | 0999 | | BLANK COMMENTS |
| 0039 | 10000 | COR 0005 | | | PAIR ADDRESS CONTROL |
| 0040 | 30000 | COR 0007 | | | EDITING |
| 0041 | STAB | BLR 1000 | 1999 | | SYMBOL TABLE |
| 0042 | ETAB | BLR 2000 | 2999 | | EQUIVALENTS TABLE |
| 0043 | A | COR 0001 | | | A FIELD ZZZZNNNNN |
| 0044 | AH | COR 0001 | | | AH FIELD OOZZZOONNN |
| 0045 | M | COR 0001 | | | |
| 0046 | MH | COR 0001 | | | |
| 0047 | C | COR 0001 | | | |
| 0048 | CH | COR 0001 | | | |
| 0049 | ITAP1 | EQU 0300 | | | INPUT TAPE |
| 0050 | OTAP1 | EQU 0500 | | | OUTPUT TAPE |
| 0051 | OTAP2 | EGN 0600 | | | CONTROL FOR FLOW PASS PSEUDOCODE |
| 0052 | CHATO | EQU 0700 | | | COMMENTS FOR FLOW PASS |
| 0053 | COMTS | 9LR 3400 | 3599 | | |
| 0054 | CHTS1 | EQU 3401 | | | |
| 0055 | STOPT | EQU W9801 | | | |
| 0056 | EXIT | EQU BOFS | | | VARIOUS TEMP STORAGES |
| 0057 | EXIT1 | EGU 81Fa | | | ा राजा प्रकृत क्षेत्र विकास प्रकार प्रकार प्रकार प्रकृतिक क्षेत्र विकास |
| 0058 | EXIT2 | EQU 92FB | | | |
| 0059 | TEMP | EQU B3FB | | | |
| 0060 | TEMP1 | EQU 84F8 | | | |
| 0061 | TEMP2 | EQU 85FB | | | |
| 0062 | ERROR | EQU 86FB | | | ERRORS ON CURRENT LINE |
| 0063 | DEFX | EQU 87F8 | | | Petrician air Saitumti Figure |
| · · · · - | - m · N | **** Di. B | | | |

| 0064 |
|------|
| 0065 |
| 0066 |
| 0067 |
| 0068 |
| 0069 |
| |
| 0070 |
| 0071 |
| 0072 |
| 0073 |
| 0074 |
| 0075 |
| 0076 |
| 0077 |
| 0078 |
| 0079 |
| 0080 |
| 0081 |
| 0082 |
| |
| 0083 |
| 0084 |
| 0085 |
| 0086 |
| 0087 |
| 0068 |
| 0089 |
| 0090 |
| 0091 |
| 0092 |
| |
| 0093 |
| 0094 |
| 0095 |
| 0096 |
| 0097 |
| 0098 |
| 0099 |
| 0100 |
| 0101 |
| 0102 |
| 0103 |
| 0104 |
| 0105 |
| 0109 |
| |
| 0107 |
| 0108 |
| 0109 |
| 0110 |
| 0111 |
| 0112 |
| |

0113

| UDEFX | EQU | 88F8 |
|-------|--------|--------|
| | | |
| SYMBL | EQU | 89FB |
| INCRE | EQU | BOFC |
| PANIC | EGU | BIFC |
| MASK | EQU | B2FC |
| CORE | EQU | BJFC |
| | | |
| BLANK | EQU | 84FC |
| ALOC | EQU | BSFC |
| MLOC | EQU | BOFC |
| CLOC | EQU | 87FC |
| DEXIT | EQU | BAFC |
| SIGN | EQU | BOFC |
| - | | |
| R | EQU | BOFG |
| LINE | EQU | BIFG |
| MCN | EGU | 82FG |
| MCZ | EQU | BJFG |
| MC | EQU | 84FG |
| OP | EQU | 85FG |
| | | |
| IR | EQU | 86FG |
| TAPEI | EQU | 87FG |
| TCONT | EQU | BBFG |
| LTAPE | EQU | 89FG |
| TEX1 | EQU | BOFH |
| TEX | EQU | BIFH |
| AEX | EGU | 82FH |
| | | |
| ALEV | EQU | 83PH |
| MLEV | EGU | 84FH |
| CLEV | EQU | SSFH |
| HTAG | EQU | BOFH |
| FTAG | EQU | 87FH |
| RTAG | EQU | BAFH |
| OPTIM | EQU | 89FH |
| SHR1 | EQU | BOAC |
| SHR2 | EQU | BIAC |
| LC | EQU | B2AC |
| LINEO | | |
| | EQU | BJAC |
| FLAG | EQU | 84AC |
| ACCUM | EQU | 85AC |
| MUMI | EGU | BEAC |
| MUML | EQU | 87AC |
| COMI | EQU | BBAC |
| KEY | EQU | BPAC |
| | | |
| DK | EQU | BOAB |
| HSB | EGU | 84AB |
| HSB1 | EGU | 89AB |
| BLA | EQU | BOAG |
| BLR | EQU | BIAG |
| COR | EQU | B2AG |
| PSUDX | EQU | BJAG |
| EQU | EQU | 844G |
| ~~~ | ** # * | G-Luke |

NUM CONSTANT ZON CONSTANT CON CONSTANT

LINE COUNTER IN INPUT BUFFER CONTROL FOR TAPE BUFFER UNLOAD LAST TAPE COMMAND

LINE COUNTER ON OUTPUT PAGE LINE COUNTER IN OUTPUT BUFFER

ERRORS ON LAST ERRONEOUS LINE

CONTROL OPS STARTING LOCATIONS

| 0114 | | | | | | HHH | EQU | BSAG | | |
|------|--------|-----|------|------|------|-------|-----|-------|-------|--|
| 0115 | | | | | | FLO | EQU | 86AG | | |
| 0116 | | | | | | END | EQU | B7AG | | |
| 0117 | | | | | | NEW | EQU | BBAG | | |
| 0118 | | | | | | CON | EQU | BOAH | | |
| 0119 | | | | | | NUM | EQU | BIAH | | |
| 0120 | | | | | | ZON | EOU | BZAH | | |
| 0121 | | | | | | PAT | | | | |
| 0122 | | | | | | | EQU | BJAH | | |
| 0123 | | | | | | ALF | EQU | BUAH | | |
| | | | | | | OFF | EQU | BSAH | | |
| 0124 | | | | | | TYP | EQU | BOAH | | |
| 0125 | | | | | | FUNNY | EQU | BSAH | | |
| 0126 | | | | | | BOP1 | EGU | 89AH | | |
| 0127 | 8679 | | 0 HH | HHHH | HHHH | R0010 | CON | ниннн | HHHHH | |
| 0128 | BJFH | 888 | 0 00 | 0000 | 0000 | ALEV | CON | 00000 | 00000 | |
| 0129 | 84FH | 898 | 0 00 | 0000 | 0000 | MLEV | CON | 00000 | 00000 | |
| 0130 | BSFH | 888 | 0 00 | 0000 | 0000 | CLEV | CON | 00000 | 00000 | |
| 0131 | BSFC | 858 | 0 00 | 0000 | 0000 | ALOC | CON | 00000 | 00000 | |
| 0132 | BOFC | | 0 00 | 0000 | 0000 | MLOC | CON | 00000 | 00000 | |
| 0133 | B7FC | | 0 00 | 0000 | 0000 | CLOC | CON | 00000 | 00000 | |
| 0134 | BTAC | | 0 00 | 0000 | 0000 | MUML | CON | 00000 | 00000 | |
| 0135 | BBAH | | 0 00 | 2000 | 0000 | FUNNY | CON | 00200 | 00000 | BOOA - B99F PART OF CORE USUALLY UNAVAILABLE |
| 0136 | 84AB | | 0 22 | 2220 | 0000 | HSB | CON | 22222 | 00000 | WHAT GADAAD CHOOSES FOR H |
| 0137 | BAAB | | 0 00 | | 4000 | | | | | |
| 0138 | 0 - MD | 990 | 0 00 | 0000 | 4000 | HSB1 | CON | 00000 | 04000 | HIGH-SPEED BANDS |
| 0136 | | | | | | | HHH | | C | |
| | | | | | | | | | | |

| | | | | | | | | | _ | SYMBOL TABLE SEARCH (SRCH#) |
|------|------|----------|-------------|-------|---|------|--------|-------|-------------|-----------------------------|
| 0139 | 8712 | 888 0 60 | 81F8 | BOOA | SRCH# | STA | EXITI | | 5. | SYMBOL TABLE SEARCH (SRCH*) |
| 0140 | BOOA | 888 0 65 | B2FB | BOLA | | STX | EXIT2 | | | |
| 0141 | BOLA | 888 0 50 | 83F8 | 802A | | STL | TEMP | | | |
| 0142 | BO2A | 888 0 26 | 8713 | 8713 | | CLA | | | | |
| 0143 | 8713 | 888 0 75 | 0008 | BOJA | | SUB | RL | | | |
| 0144 | BOJA | 888 0 77 | BOJA | BO4A | | ATL | | | | |
| 0145 | BO4A | 888 0 85 | 8714 | 805A | | MUL# | 10010 | 01001 | | |
| 0146 | 805A | 888 0 32 | 0600 | 806A | | SHR | 0600 | | | |
| 0147 | BOGA | 888 0 07 | OHHH | 807A | | IIR | OHMH | | | |
| 0148 | 807A | 888 0 35 | 0000 | ABOBA | | ERS | RX | | Si. | SCRAMBLE |
| 0150 | BOSA | 88B 0 30 | 83F8 | 8716 | | LDL | TEMP | & SR2 | | |
| 0152 | 8716 | 888 0 20 | 8717 | AOOO | &SR2 | BUF | | RA | | |
| 0153 | 8717 | 888 0 08 | 0000 | 9715 | | LIRI | 0000 | -SR2 | | |
| 0154 | 8715 | 888 0 29 | 1000 | 809A | -SR2 | LDAI | | | 52. | SYMBOL: TABLE |
| 0155 | 809A | 888 0 82 | 8718 | 810A | • | TEQ | 3F | | | |
| 0156 | BIOA | 35B 0 70 | 8719 | 8720 | | ADD | • | -SR1 | | |
| 0157 | 8719 | 888 0 99 | 9999 | 9999 | | CON | 99999 | 99999 | | |
| 0158 | 8721 | 898 0 OG | 0023 | 811A | &SR1 | IIRI | 0023 | | S3 . | TABLE: ZERO |
| 0159 | BILA | 888 0 70 | 8722 | 8715 | | ADD | 000 | -5R2 | | |
| 0160 | 8722 | 888 0 99 | 9000 | 0000 | | CON | 99900 | 00000 | | |
| | | 856 0 54 | 1000 | 81FB | -SR1 | | STAB | EXIT1 | 54. | NOT FOUND. |
| 0162 | 8720 | | | | | | BATS | EXIT2 | • • • | |
| 0163 | 8718 | 88B 0 29 | 2000 | 82F8 | 3 | FDVI | 5 1 MG | EVT:# | | |
| 0166 | | | | | | | | | | |
| 0167 | | | | | | | | | | |
| 0168 | | | | | | | | | | |
| 0169 | | | | | | | | | | |
| 0170 | | | | | | | | | | |
| 0171 | | | | | | | | | | |
| 0172 | | | | | | | | | | |
| 0173 | | | | | | | | | | |
| | | | | | | | | | | |

| 0174 | 8723 | 888 | 3 50 | BOFB | 812A | FARB# | STL | EXIT | | F. | FIND AND | RESERVE | BEST | LOCATION | (FARB*) |
|------|------|-------|------|------|--------------|-------|------|-------------|------------|------|---------------|----------|------|----------|---------|
| 0175 | B12A | 888 | 1 09 | 8707 | 813A | | LDX3 | | | - | | | | | , , , , |
| 0176 | 813A | 888 | | 8724 | 814A | | | 00000 | 10000 | | | | | | |
| 0177 | 814A | 888 | | BJFB | 815A | | STA | TEMP | | | | | | | |
| 0179 | 915A | 898 | | 8725 | 8725 | | CLL | • • • | | | | | | | |
| 0180 | 8725 | 888 | | BIFC | 816A | | STL | PANIC | | F1. | EXAMINE | H-FIELD | | | |
| 0181 | 816A | 888 | | 0000 | 8726 | | LIRO | 0000 | 2F | , •• | or Multiplian | | | | |
| 0182 | 8726 | 888 | | 000C | 8727 | 2 | LDL | RX | 3F | | | | | | |
| 0183 | 8727 | 888 | | 8683 | 817A | 3 | STL | U0003 | Jr | | | | | | |
| 0184 | 817A | 888 | | 8728 | 918A | • | LDA# | 00000 | 00888 | | | | | | |
| 0185 | BIBA | 888 | | 8729 | a730 | | TEQ | 00000 | 3F | | | | | | |
| 0186 | 8729 | 888 | | BOFH | | | | LITAG | 3 P | | | | | | |
| 0187 | 819A | 888 | | 8684 | 819A 820A | | LDL | HTAG | | | | | | | |
| 0188 | BZOA | 888 | - | 0008 | 8727 | | LDX | V0000 | 38 | | | | | | |
| 0189 | 8730 | 888 | | 8680 | 321A | 3 | | RL U0000 | ا ل | | | | | | |
| 0190 | 821A | 858 | | 8684 | 822A | | | V0000 | | | | | | | |
| 0191 | 822A | 888 | | 0001 | 8730 | | IIR6 | | 38 | | | | | | |
| 0192 | 8680 | 888 | | 1000 | | U0000 | | 0001 | | | | | | | |
| 0193 | 8681 | | 00 0 | 1000 | 0488 0388 | | CON | 00100 | 00488 | | | | | | |
| 0194 | B682 | | | | | U0001 | CON | 00100 | 00388 | | | | | | |
| 0195 | | | | 1000 | 0888 | U0002 | CON | 00100 | 00888 | | | | | | |
| | 8687 | | 0 25 | 0008 | 823A | V0003 | LDA | RL | | | | | | | |
| 0196 | 823A | 888 (| - | AOOO | 824A | | SUB | RA | | | | | | | |
| 0197 | 824A | 89B | - | 8731 | 8731 | | CLL | | | | | | | | |
| 0198 | 8731 | 888 | | 8732 | 825A | | TEQ | 1F | | | | | | | |
| 0199 | 825A | 888 | | 8733 | 826A | | | 00000 | 00400 | | | | | | |
| 0200 | 826A | 858 | | 8734 | 827A | | TEQ | 3F | | | | | | | |
| 0201 | 827A | 888 | | 0001 | 828A | | IIRJ | 0001 | | | | | | | |
| 0202 | BZSA | | 0 30 | 8735 | 8736 | | LDL | | ERR1* | | | | | | |
| 0203 | 8735 | | 1 0G | 9999 | 8684 | _ | IIRS | 9999 | V0000 | | | | | | |
| 0204 | 8732 | | 25 | 6000 | 829A | 1 | LDA | RL | - N 3 | | | | | | |
| 0205 | 829A | | 70 | 8737 | 8738 | | ADD | | -NU | | | | | | |
| 0206 | 8737 | | 00 | 7000 | 0000 | | CON | 00700 | 00000 | | | | | | |
| 0207 | 8739 | | 70 | BJFB | AJOA | BNU | ADD | TEMP | | | | | | | |
| 0206 | BJOA | | 60 | 83F8 | 8684 | | STA | TEMP | V0000 | _ | _ | _ | | | |
| 0209 | 8738 | | 3 07 | 9998 | 831A | -NU | IIR6 | 9998 | | F2. | USE HAND | LEVEL | | | |
| 0510 | 831A | - | 60 | BIFC | 832A | | STA | PANIC | | | | | | | |
| 0211 | 832A | 856 | 65 | BJFB | 9740 | _ | | TEHP | 2F | | | | | | |
| 0212 | 8734 | 888 (| 25 | 8741 | 833A | 3 | | 00000 | 000HH | | | | | | |
| 0213 | BJJA | 858 | | BIFC | 834A | | | PANIC | | | | | | | |
| 0214 | BJ4A | 888 | | 0000 | 635A | | | RX | · ** | | | | | | |
| 0215 | 835A | 898 (| | BJFB | 9740 | • | | TEMP | 2F | | | | | | |
| 0216 | 8740 | 888 9 | | 9999 | 8684 | 2 | IIR6 | 9999 | V0000 | | | | | | |
| 0217 | 8684 | 88B | | 0000 | 8742 | V0000 | IIR2 | 0000 | 2F | F3. | ADJUST F | OR PAIRS | | | |
| 0218 | 8686 | 388 | | 0000 | 9742 | A0005 | IIR2 | 0000 | 2F | | | | | | |
| 0219 | 8742 | 888 | | 8743 | 8744 | 5 | ADD | | -F1 | | | | | | |
| 0220 | 8743 | 888 | | 9995 | 0000 | | CON | 99999 | 50000 | | | | | | |
| 0221 | 8744 | 858 | | 8746 | 8746 | -F1 | CLA | 3F | | | | | | | |
| 0222 | 8745 | 888 | | 0001 | 836A | &F1 | IIR6 | 0001 | | | | | | | |
| 0223 | 836A | 888 | 5 07 | 0000 | 9746 | | IIRS | 0000 | 3F | | | | | | |
| | | | | | | | | | | | | | | | |

| | | - - | | | | | | | |
|------|---------------|----------------|-------------|------|-------|-------|--------|-------|-----------------------|
| 0224 | B746 | 888 0 60 | 84FB | 8747 | 3 | STA | TEMP 1 | -FAR8 | |
| 0228 | 8685 | 888 1 07 | 0000 | 837A | V0001 | IIR2 | 0000 | | F4. ROOM IN CORE |
| 0229 | 8 37 A | 888 0 70 | B749 | 8750 | | ADD | | -F8 | |
| 0230 | 8749 | 888 0 99 | 9995 | 0000 | | CON | 99999 | 50000 | |
| 0231 | 8750 | 888 0 07 | 0001 | 8752 | -F8 | IIR | 0001 | 1F | |
| 0232 | 8751 | 888 0 07 | 0002 | 8752 | &F8 | IIR | 0002 | 1F | |
| 0233 | 8752 | 888 0 70 | BJFC | ASEE | 1 | ADD | CORE | | |
| 0234 | ASCE | 888 0 05 | 000A | 839A | - | LDX | RA | | |
| 0235 | 839A | 888 0 70 | 8753 | 8754 | | ADD | | -F9 | |
| 0236 | 8753 | 888 0 99 | 9000 | 0000 | | CON | 99900 | 00000 | |
| 0237 | B754 | 888 0 65 | 83FC | 840A | -F9 | STX | CORE | | F5. ASSIGN CORE ADDR. |
| 0238 | 840A | 888 0 65 | BBAB | 341A | | STX | R89 | | |
| 0239 | 841A | 888 8 07 | 8999 | 842A | | IIR9 | 8999 | | |
| 0240 | 842A | 888 0 60 | 8695 | 843A | | STA | 10001 | | |
| 0241 | 843A | 88B 8 07 | 0001 | 8756 | | IIR9 | 0001 | FAREX | |
| 0242 | 8755 | 888 0 25 | 8758 | B44A | &F9 | LDA# | | 00006 | |
| 0243 | 844A | 888 0 05 | 8759 | 8760 | | LDX | | ERR2* | |
| 0244 | 8759 | 888 0 00 | 8761 | 8761 | | JHP | | | |
| 0245 | 8761 | 888 5 07 | 0001 | 3686 | | IIR6 | 0001 | V0002 | |
| 0246 | 8747 | 888 0 25 | 83F8 | 845A | -FARB | LDA | TEMP | | F6. INITIALIZE |
| 0247 | 845A | 888 Q 37 | 0400 | 846A | | SHL | 0400 | | |
| 0248 | 846A | 888 0 70 | 84F9 | 947A | | ADD | TEMP1 | | |
| 0249 | 847A | 888 0 77 | 847A | 848A | | ATL | | | |
| 0250 | 848A | 888 0 60 | B4AC | 349A | | STA | FLAG | | |
| 0251 | 849A | 888 5 00 | 8641 | 3641 | | JMP6 | F0016 | | |
| 0252 | 8642 | 888 0 85 | 8762 | 8763 | F0017 | MUL | 1F | 2F | |
| 0253 | 8641 | 888 0 85 | 8762 | 8763 | F0016 | MUL | 1F | 2F | |
| 0254 | 8762 | 888 0 00 | 0000 | 00A5 | 1 | CON | 00000 | 000A5 | |
| 0255 | 8763 | 888 0 35 | 8764 | BSOA | 2 | ERS# | 0000H | H5000 | |
| 0256 | 850A | 888 0 70 | OOOA | 8765 | | ADD | RA | 3F | |
| 0257 | 8643 | 888 0 35 | 8766 | 8765 | F0018 | ERS | 1F | 3F | |
| 0258 | B644 | 888 0 35 | 8766 | 8765 | F0019 | ERS | 15 | 3F | |
| 0259 | 8766 | 888 0 00 | OOCH | 0000 | 1 | CON | 0000C | H0000 | |
| 0260 | 8765 | 888 0 60 | BAAB | 951A | 3 | STA | R87 | | |
| 0261 | 851A | 888 0 31 | 8767 | 8767 | | CLL | | | |
| 0262 | 8767 | 888 0 25 | 8617 | 352A | | LDA | 00200 | | |
| 0263 | 852A | 888 0 60 | 8417 | 8768 | | STA | D0000 | -F2 | |
| 0264 | 8768 | 888 6 25 | 8418 | BSJA | -F2 | LDA7 | 00001 | | F7. TRY LEVEL |
| 0265 | 853A | 888 5 00 | 8629 | 8629 | | JMP6 | F0004 | | |
| 0266 | 8630 | 888 6 35 | 8417 | 8629 | F0005 | ER\$7 | 00000 | F0004 | |
| 0267 | 8631 | 888 6 20 | 5468 | 854A | F0006 | BUF7 | D0051 | | |
| 0268 | 854A | 898 6 20 | 8518 | 855A | | BUF7 | D0101 | | |
| 0269 | 855A | 888 6 20 | 8568 | 8770 | | BUF7 | D0151 | 1F | |
| 0270 | 8770 | 388 0 35 | 84AB | 8629 | 1 | ERS | HSB | F0004 | |
| 0271 | 9632 | 888 6 35 | 8417 | 856A | F0007 | ERS7 | | | |
| 0272 | 856A | 888 0 05 | AOOO | 857A | | LDX | RA | | |
| 0273 | 857A | 888 6 25 | 8468 | 858A | | LDA7 | | | |
| 0274 | 858A | 888 6 35 | 8467 | 859A | | ER57 | | | |
| 0275 | 859A | 888 0 20 | 0000 | 860A | | SUF | ЯX | | |
| 0276 | 860A | 888 0 05 | OOOA | 861A | | LDX | RA | | |
| | | | | | | | | | |

| 0277 | 861A 888 6 2 | 9 8518 862A | | LDA7 D0101 | | |
|--------------|------------------------------|-------------|---------|-------------|----------------|-----------------------|
| 0278 | 862A 888 6 3 | | | ERS7 00100 | | |
| 0279 | 863A 888 0 2 | | | SUF RX | | |
| 0280 | 864A 888 0 O | | | LDX RA | | |
| 0281 | 865A 88B 6 2 | | | LDA7 00151 | | |
| 0282 | 866A 888 6 3 | | | ERS7 D0150 | | |
| 0283 | 867A 888 0 2 | | | SUF RX | 18 | |
| 0284 | 8629 888 0 8 | | F0004 | TEQ | 2F | |
| 0285 | 8771 888 0 2 | | | LDA PANIC | | F8. DRUM EXHAUSTED |
| 0286 | 868A 888 0 8 | | | TEQ 3F | | |
| 0287 | 869A 888 0 5 | | | STL PANIC | | |
| 0288 | 870A 888 0 2 | | | LDA# 00000 | 0 000 G | |
| 0289 | 871A 888 0 0 | | | LDX | ERR2* | |
| 0290 | 8775 888 0 0 | | | JMP 3F | | |
| 0291 | 8773 888 6 0 | | 3 | IIR7 0001 | | |
| 0292 | 872A 888 5 7 | D B645 8768 | | ADD6 F0020 | -F2 | |
| 0293 | 8645 888 0 9 | 9800 0000 | F0020 | CON 99980 | 00000 | |
| 0294 | B646 BBB 0 9 | | F0021 | CON 99980 | 00000 | |
| 0295 | 8647 888 0 9 | | F0022 | CON 99995 | 00000 | |
| 0296 | 8648 888 0 9 | | FQ023 | CON 99995 | 00000 | |
| 0297 | 8769 888 0 2 | 5 84AC 873A | &F2 | LDA FLAG | | |
| 0298 | 873A 888 0 8 | 2 8776 874A | | TEQ 1F | | |
| 0299 | 874A 888 0 5 | 0 84AC 875A | | STL FLAG | | |
| 0300 | 875A 88B 6 0 | 2 0000 8768 | | LIR7 0000 | -F2 | |
| 0301 | 8776 B88 Q 2 | 5 8777 876A | 1 | LDA# 00000 | 0000G | |
| 0302 | 876A 888 0 0 | 5 8778 8760 | | LDX | ERR2* | |
| 0303 | 8778 888 0 0 | 8779 8779 | | JHP | | |
| 0304 | 8779 888 5 0 | | | IIR6 9998 | | |
| 0305 | 877A 888 0 7 | | | ADD | -FARB | |
| 0306 | 8780 888 0 9 | | | CON 99999 | 80000 | |
| 0307 | 8748 888 Q 2 | | &FAR8 | CLA | | |
| 0308 | 8781 88B 0 6 | | | STA 10001 | FAREX | |
| 0309 | 8772 888 5 0 | | 2 | JMP6 F0008 | | F9. CALCULATE ADDRESS |
| 0310 | 8635 888 6 2 | | F0010 | LDA7 D0001 | 1F | |
| 0311 | 8782 888 0 3 | | 1 | ers HSB | | |
| 0312 | 878A 888 0 8 | | | TEO | 2F | |
| - 0313 | 8783 888 6 0 | | | IIR7 0050 | 20 | |
| 0314 | 8636 888 6 2 | | F0011 | LDA7 D0001 | | |
| 0315 | 879A 88B 6 3 | | | ERS7 00000 | 18 | |
| 0316 | 8633 BBB 6 2 | | F0008 | LDA7 D0001 | 2F | |
| 0317 | 8634 888 6 2 | | F0009 | LDA7 00001 | | |
| 0318 | 880A 888 6 3 | ·- | _ | ER\$7 00000 | 2F | |
| 0319 | 8784 858 0 0 | | 2 | LDX RA | | |
| 0320 | 881A 888 0 3 | | | ERS# GGGGG | G€ GGG | |
| 0321 | 882A 88B 0 8 | | | TEQ 1F | 4640:- | |
| 0322 | 883A 888 0 3 | | | ERS# 99999 | 99999 | |
| 0323 | 884A 888 0 8 | - | | TEO 2F | 墨笔》章 | · |
| 0324 | 885A 88B 0 3 | | | ERS# 55555 | 55555 | |
| 0325 0326 | 886A 888 0 8 887A 888 0 2 | | | TEG 3F | 4F | |
| U360 | 887A 888 0 2 | 5 8791 8792 | | LDA | 47 | |
| | | | | | | |

| 0327 | B791 | 888 0 CH | НННН | HHHH | | CON CHHHH | ННННН | |
|--------------|--------------|----------------------|------|------|-------|------------|-------------------|----------------------|
| 0328 | 8790 | 888 0 25 | | ASEE | 3 | LDA# 8HHHH | ННННН | |
| 0329 | 8888 | 888 0 30 | | 8792 | | LDL | 4F | |
| 0330 | 8794 | 888 0 00 | | 0000 | | CON 00200 | 00000 | |
| 0331 | 8788 | BBB 0 25 | | 889A | 2 | LDA# FHHHH | HHHHH | |
| 0332 | APSB | 898 0 30 | | 8792 | | LOL | 4F | |
| 0333 | 3796 | 888 0 00 | | 0000 | | CON 00400 | 00000 | |
| 0334 | 8786 | 888 0 25 | 8797 | 890A | 1 | LDA# GHHHH | ННННН | |
| 0335 | 890A | 888 0 30 | 8798 | 8792 | | LDL | 4F | |
| 0336 | 8798 | 888 0 00 | 6000 | 0000 | | CON 00600 | 00000 | |
| 0337 | 8792 | 88B 0 50 | BASB | 891A | 4 | STL RB9 | | |
| 0338 | BOLA | 888 0 30 | 0000 | 892A | | LDL RX | | |
| 0339 | 892A | 556 C 05 | 8799 | 9800 | | LDX | 1F | |
| 0340 | 8799 | 888 0 HH | HHHH | HHHH | | CON HHHHH | HHHHH | |
| 0341 | 8800 | 888 0 60 | B2FC | 893A | 1 | STA MASK | | |
| 0342 | 893A | 888 0 35 | 8000 | 894A | | ERS RL | | |
| 0343 | 894A | 888 0 82 | 8801 | 8802 | | TEQ | 1F | |
| 0344 | 8801 | 888 8 07 | | 895A | | IIR9 0200 | _ | |
| 0345 | 895A | 888 0 25 | | 896A | | LDA MASK | | |
| 0346 | 896A | BBB 0 32 | | 8800 | | SHR 0100 | 18 | |
| 0347 | 8802 | 888 5 00 | | 8637 | 1 | JMP6 F0012 | | FIO.RESERVE ADDRESS. |
| 0348 | 8639 | 888 6 25 | | 897A | F0014 | LDA7 00001 | | |
| 0349 | 897A | 888 0 35 | | 9637 | | ERS MASK | F0012 | |
| 0350 | 8638 | 888 6 25 | | 8603 | F0013 | LDA7 00000 | 15 | |
| 0351 | 8640 | 888 6 25 | | 8803 | F0015 | LDA7 00000 | 1F | |
| 0352 | 8803 | 888 0 35 | | 898A | 1 | ERS MASK | | |
| 0353 | 898A | 58B 6 60 | | 9639 | | STA7 00000 | F0014 | |
| 0354 | 8637 | 888 6 60 | | 899A | F0012 | STA7 00001 | | |
| 0355 | 899A | 888 0 25 | | 800F | | LDA DOOOQ | | |
| 0356 | BOOF | 855 0 35 | | 801F | | ERS D0200 | | |
| 0357 | 801F | 888 0 60 | | 802F | | STA 00200 | | |
| 0358 | 802F | 35B 6 07 | | 803F | | IIR7 0000 | | |
| 0359 0360 | 803F | B8B 0 31 | | 8804 | | CLL | | |
| 0361 | 5804 | 888 0 82 | - | 3506 | | TEO | 1F | F11.FINISH UP |
| 0362 | 8805 | 888 0 07 | | 8807 | | IIR 0199 | 2F | |
| | 8806 | 888 0 75 | | 8807 | 1 | SUB | 2F | |
| 0363 0364 | 8088 | 888 0 00 | | 0000 | _ | CON 00000 | 10000 | |
| 0365 | 8807 | 888 0 70 | | 804F | 2 | ADD RB9 | | |
| 0366 | 804F | 888 0 60 | | 805F | | STA 10001 | | |
| 0367 | 805F | 888 6 07 | | 806F | | 11R7 0000 | ** * ** ** | |
| 0368 | 806F | 858 0 70 | | 8756 | | ADD R89 | FAREX | |
| 0369 | 8756 | 888 0 06 | | 8809 | FAREX | CLX | | |
| 0370 | 8809 807F | BBB 0 60 | - | BO7F | | STA 10000 | | |
| 0370 | 808F | 888 0 60 888 0 32 | | 808F | | STA 10002 | | |
| | SAGL | 900 V 32 | 0400 | BOFE | | SHR 0400 | EXIT | |
| | | | | | | | | |

| 0372 | 8810 | 886 . 30 | 2904 | ~~~ | E + Nife . | | | • | |
|--------------|--------------|----------------------|--------------|---------------|------------|-------------------------|----------------|---|-------|
| 0373 | 8095 | 888 1 29 888 0 65 | | 30 9 F | FIND* | LDA3 A | | Q. MASTER ADDRESS CALCULATOR (F) | (NO*) |
| 0374 | 810F | 888 0 65 888 0 50 | 87F8 88F8 | 810F 811F | | STX DEFX STL UDEFX | | | |
| 0375 | BILF | 888 0 60 | | B12F | | | | | |
| 0376 | 812F | 888 0 30 | | 813F | | STA SYMBL LDL# 00000 | 88988 | | |
| 0377 | 813F | 888 0 82 | | 814F | | | 90900 | As weign attack | |
| 0378 | 914F | 888 0 30 | | 815F | | | 6866 a | Q1. WHAT KIND | |
| 0379 | 815F | 888 0 82 | | 816F | | | 88888 | | |
| 0380 | 816F | 88B 0 35 | | 817F | | TEQ SELF ERS# H0000 | HOODA | | • |
| 0381 | 817F | 888 0 30 | | 818F | | | H0000 | | |
| 0382 | 818F | 898 0 82 | | 819F | | LDL# 00000 TEQ ABS | 80000 | _ | |
| 0383 | 819F | 88B 0 25 | | 820F | | | | | |
| 0384 | 820F | 888 0 35 | | 921F | | LDA SYMBL Ers# 00000 | A7777 | | |
| 0385 | 821F | 888 Q C1 | | 922F | | ERS# 00000 MTX | 03333 | | |
| 0386 | 822F | 888 0 20 | | 823F | | BUF# OHHHH | 00000 | | |
| 0387 | 823F | 888 0 35 | | 824F | | ERS SYMBL | 00000 | | |
| 9860 | 924F | 888 0 35 | | 825F | | ERS# OHHHH | 04444 | | |
| 0389 | 825F | 888 0 31 | | 8821 | | CLL | 04444 | | |
| 0390 | 3821 | 888 0 50 | | 826F | | STL INCRE | | | |
| 0391 | 826F | 888 0 82 | | 827F | | TEQ REG | | | |
| 0392 | 827F | 888 0 25 | | 828F | | LDA SYMBL | | | |
| 0393 | 826F | 858 0 35 | | 829F | | ERS# 00000 | H0000 | | |
| 0394 | 829F | 888 0 60 | | 930F | | STA R85 | 1,0000 | | |
| 0395 | 830F | 888 0 35 | | 831F | | ERS# 00000 | 30000 | | |
| 0396 | 831F | 888 0 C1 | 831F | 832F | | MTX | 2000 | | |
| 0397 | 832F | 888 0 20 | | 333F | | SUF# HHHHH | ОНННН | | |
| 0398 | 833F | 858 0 35 | 89F8 | 834F | | ERS SYMBL | . , | | |
| 0399 | 834F | 888 0 35 | | 335F | | ERS# HHHHH | 4 H HHH | | |
| 0400 | 835F | 888 0 30 | | 836F | | LDL# 01000 | 06858 | | |
| 0401 | 836F | 888 0 82 | | 837F | | TEQ LOCF | | | |
| 0402 | 937F | 888 0 30 | 8829 | 838F | | LDL# 01000 | 02888 | | |
| 0403 | 838F | 888 0 82 | | 839F | | TEG LOCE | | | |
| 0404 | 839F | 888 0 30 | 8831 | 840F | | LDL# 00000 | 08888 | | |
| 0405 | 840F | 888 0 82 | 8832 | 841F | | TEQ LOCL | | | |
| 0406 | 841F | 888 0 25 | BOFB | 842F | | LDA SYMBL | | | |
| 0407 | 842F | 888 0 35 | 8833 | 843F | | ERS# H0000 | H0000 | | |
| 0408 | 843F | 888 0 30 | 8834 | 844F | | LDL# 10000 | C0000 | | |
| 0409 0410 | 844F | 888 0 82 | | 845F | | TEO PLUS | | | |
| 0411 | 845F | 888 0 30 | 8836 | 846F | | LDL# 00000 | COCOA | | |
| 0412 | 846F 847F | 888 0 82 888 0 31 | 8837 | 847F | | TEO MINUS | | | |
| 0413 | 8838 | 858 0 35 | 8838 | 8838 | | CLL | **** | | |
| 0414 | 848F | 858 0 82 | 8839 | 848F | | ERS# H0000 | 00000 | | |
| 0415 | 849F | 88B 1 02 | 8840 | 8495 | | TEG ADERR | | | |
| 0416 | 8837 | 858 3 02 | 0004 | 5541 5542 | MINUS | LIR2 0004 | LOOKI | | |
| 0417 | 8835 | 888 J 02 | 0000 | 3842 | | LIR5 0001 | 1F | | |
| 0418 | 8842 | 888 1 02 | 0005 | 8841 | PLUS 1 | LIR5 0000 LIR2 0005 | 1F | | |
| 0419 | 8812 | 888 0 31 | 8843 | 8843 | SLNK | | FOOK 1 | AS BI AND STOR | |
| 0420 | 8843 | B8B 0 25 | 84FC | 850F | 2FuV | CLL LDA BLANK | • | G2. BLANKIZERO | |
| | | V 63 | MAL C | a J V P | | LDA BLANK | | | |

| 0421 | 850F | 888 1 02 | 0002 | 8844 | | LIR2 | 0002 | FEX | |
|------|------|----------|------|------|-------|------|------------|-----------------|-----------------------|
| 0422 | 8844 | 888 0 82 | 88F8 | 87F8 | FEX | TEQ | UDEFX | DEFX | |
| 0423 | 8814 | 898 0 25 | BSFC | 87F8 | SELF | LDA | ALOC | DEFX | Q3. 'A' LOCATION |
| 0428 | 8822 | 898 0 25 | | | | | | UEFA | |
| 0429 | | | 89F8 | 851F | REG | LDA | SYMBL | m.t. h. at to i | 94. CHANGE TO ROOOO. |
| | 851F | 888 0 35 | 8845 | 852F | | ERS# | 00000 | QHHHH | |
| 0430 | 852F | 888 0 60 | BOFC | 853F | | STA | INCRE | | |
| 0431 | 853F | 888 0 25 | 89F8 | 854F | | LDA | SYMBL | | |
| 0432 | 854F | 888 0 35 | 8846 | 855F | | ERSA | H0000 | H0000 | |
| 0433 | 855F | 888 1 02 | 0000 | 8847 | | LIR2 | 0000 | LOOK | |
| 0434 | 8817 | 888 0 25 | BOFB | 856F | ABS | LDA | SYMBL | | G5. PROCESS ABS ADDR. |
| 0435 | 856F | 888 0 31 | 8848 | 848 | | CLL | | | |
| 0436 | 8848 | 888 0 35 | 5849 | 857F | | ERSA | 02222 | 00000 | |
| 0437 | 857F | 888 0 82 | 8850 | 5840 | | TEQ | | ADERR | |
| 0436 | 8850 | 888 0 25 | BOFB | 858F | | LDA | SYMBL | | |
| 0439 | 858F | 888 0 35 | 8851 | 859F | | ERS# | ннннн | ОНННН | |
| 0440 | 859F | 888 0 75 | 000A | 860F | | SUB | RA | A MILLION | |
| 0441 | BOOF | 888 0 82 | 8852 | 5840 | | TEQ | îF | ADERR | |
| 0442 | 8840 | 888 0 30 | 8853 | 8736 | ADERR | LDL | 4 F | ERR1+ | AL FORMS |
| 0443 | 8853 | BBB 0 26 | 87F8 | 87F8 | ADENA | | n#64 | ENKI + | g6. ERROR |
| 0444 | 8852 | 888 0 25 | | | | CLA | DEFX | | |
| 0445 | 861F | | 89FB | 861F | 1 | LDA | SYMBL | 00000 | |
| 0446 | | | 8854 | 862F | | ERS# | 01111 | 00000 | |
| | 862F | 888 0 70 | 000A | 863F | | ADD | RA | | |
| 0447 | 863F | 888 0 70 | A000 | 864F | | ADD | RA | | |
| 0448 | 864F | 888 0 32 | 0500 | 865F | | SHR | 0500 | | |
| 0449 | 865F | 88B 0 20 | 89F8 | 866F | | BUF | SYMBL | | |
| 0450 | 866F | 888 0 35 | 8855 | 87F8 | | ERS | | DEFX | |
| 0451 | 8855 | 888 0 00 | 0000 | HHHH | | CON | 00000 | OHHHH | |
| 0452 | 8828 | 888 3 25 | 8649 | 867F | LOCF | LDA5 | 10000 | | 97. I(N):ZERO |
| 0453 | 867F | 888 0 31 | 8856 | 8856 | | CLL | | | |
| 0455 | 8856 | 888 1 02 | 0001 | 8844 | | LIR2 | 0001 | FEX | |
| 0456 | 8830 | 888 3 25 | B659 | 868F | LOCB | LDA5 | 10000 | | Q8. J(N):ZERO |
| 0457 | 868F | 888 0 31 | 8857 | 3857 | | CLL | | | |
| 0460 | 8857 | 888 0 82 | 8840 | 8758 | | TEG | ADERR | DEFX | |
| 0461 | 8832 | 888 3 25 | B649 | 869F | LOCL | LDA5 | 10000 | | Q9. I(N) IZERO |
| 0462 | 869F | 888 0 31 | 8858 | 3858 | | CLL | | | |
| 0463 | 8858 | 888 3 50 | 8649 | 870F | | STL5 | 10000 | | |
| 0464 | 870F | 88B 1 02 | 0003 | 871F | | LIR2 | 0003 | | |
| 0465 | 871F | 888 0 82 | Bafa | 872F | | TEQ | UDEFX | | |
| 0466 | 872F | 888 J 60 | 8659 | 67F8 | | | 10000 | DEFX | |
| 0467 | 8841 | 888 0 25 | 89F8 | 8847 | LOOKI | LDA | SYMBL | LOOK | G10.SRCH* |
| 0468 | 8847 | 888 0 77 | 8847 | | - | | STRUE | LOUR | WICH SKCH |
| 0469 | 873F | - | | 873F | LOOK | ATL | : | | |
| 0470 | | 888 0 25 | 88F8 | 974P | | LDA | UDEFX | ***** | |
| | 874F | 838 0 05 | 8859 | 3712 | | LDX | | SRCH* | |
| 0471 | 8859 | 888 0 70 | BOFC | 875F | | ADD | INCRE | | |
| 0472 | 875F | 888 0 35 | 8860 | 87F8 | | ERS | | DEFX | |
| 0473 | 8860 | 855 0 00 | 0000 | НННН | | CON | 00000 | OHHHH | |
| 0474 | | | | | | | | | • |
| 0477 | | | | | | | | | |
| 0481 | | | | | | | | | |
| | | | | | | | | | |

| 0487 | 8861 | 868 1 00 | 8619 | 8619 | DEFN* | JHP2 | £0000 | | 0. | DEFINE ADDRESS (DEFN#) |) |
|------|---------------|----------|------|---------------|-------|------|-------|-------|------|------------------------|---|
| 0493 | 8619 | 888 0 05 | AODO | 876F | E0000 | | RA | | | WHAT TYPE | |
| 0494 | 876F | 888 0 25 | 8862 | 377F | ~~~~ | | 00000 | 10000 | **** | Michel A. A. and | |
| 0495 | 877F | 888 0 75 | BOFC | 878F | | SUB | INCRE | | | | |
| 0496 | 878F | 888 0 32 | OFOO | 879F | | SHR | OFOO | | | | |
| 0497 | 879F | 888 0 70 | 0000 | 380F | | - | RX | | | | |
| 0498 | 880F | 888 0 35 | 8863 | 8623 | | ERS | 11.7 | E0004 | | | |
| 0499 | 8863 | 888 0 00 | 0000 | НННН | | CON | 00000 | ОНННН | | | |
| 0500 | 8620 | 888 3 60 | 8649 | 000B | E0001 | STAS | 10000 | RL | | | |
| 0501 | 8621 | 888 0 60 | 84FC | 0008 | E0002 | | BLANK | RL | 02. | CALCULATE BASE | |
| 0507 | 8622 | 888 3 60 | 8659 | 8000 | E0003 | | J0000 | RL | | | |
| 0508 | 8623 | 888 Q 64 | 2000 | 9008 | E0004 | STAL | | RL | | | |
| 0509 | 8624 | 888 0 50 | BSFC | 881F | E0005 | | DEXIT | *** | 03. | STORE TWO. | |
| 0510 | 881F | 888 3 25 | 8694 | 882F | | | 10000 | | | | |
| 0511 | 882F | 888 0 06 | 8864 | 3864 | | CLX | •••• | | | | |
| 0512 | 8864 | 888 0 32 | 0400 | 883F | | SHR | 0400 | | | | |
| 0513 | 983F | 888 C 64 | 2000 | B84F | | | ETAB | | | | |
| 0514 | 884F | 888 0 60 | 84FB | 885F | | STA | TEMP1 | | | | |
| 0515 | 8 8 5F | 888 0 29 | 1000 | 886F | | LDAI | | | | | |
| 0516 | 886F | 888 3 00 | 8697 | 8697 | | JMP5 | 10003 | | | | |
| 0517 | 8697 | 888 0 35 | 8865 | 8866 | 10003 | ERS | | 1F | | | |
| 0518 | 8865 | 888 0 OH | HHHA | HHHH | | CON | ОНННН | HHHHA | | | |
| 0519 | 8698 | 888 Q 20 | 8867 | 8866 | 10004 | BUF | | 1F | | | |
| 0520 | 8867 | 898 0 10 | 000C | 0000 | | CON | 10000 | C0000 | | | |
| 0521 | 8866 | 888 0 77 | 8866 | 887F | 1 | ATL | | | | | |
| 0522 | 887F | 88B Q 25 | 8868 | 8712 | | LDA | | SRCH* | | | |
| 0523 | 8868 | 888 0 00 | 8869 | 8869 | | JMP | | | | | |
| 0524 | 8869 | 888 J 25 | 8695 | 88 8 F | | LDAS | 10001 | | | | |
| 0525 | 888F | 888 0 06 | 8870 | 8870 | | CLX | | | | | |
| 0526 | 8870 | 888 0 32 | 0400 | 35 9 F | | SHR | 0400 | | | | |
| 0527 | 889F | 888 0 64 | 2000 | 890F | | STAL | ETAS | | | | |
| 0528 | 890F | 888 0 25 | 84F8 | BBFC | | LDA | TEMP1 | DEXIT | | | |

| 0529 | 8871 | 886 | 0 | 50 | BOFB | 991F | AJST* | STL | EXIT | | ٨. | AJST+ SUBROUTINE. |
|------|------|-----|---|----|------|------|-------|------|-------|--------------|-----|-------------------|
| 0536 | 891F | | | 30 | OOOA | 892F | 7001 | LDL | RA | | Al. | WHAT TYPE ADDRESS |
| 0537 | 392F | | | 25 | 8872 | 8873 | | LDA | NA | aF | ~~• | THE ADDRESS |
| 0538 | 5872 | | | 00 | 0000 | 0000 | | CONI | 00000 | 00000 | | |
| 0539 | 8873 | | - | 70 | 0008 | 893F | 8 | ADD | RL | | | |
| 0540 | 893F | | - | 82 | 8874 | 894F | | TEO | 16 | | | |
| 0541 | 894F | | - | 25 | 89FH | BOFB | | LDA | OPTIM | EXIT | | |
| 0542 | 8874 | | | 60 | 84FB | 895F | 1 | STA | TEMPI | | | |
| 0543 | 895F | 888 | Ŏ | 70 | 8875 | 896F | _ | ADD# | 00000 | 10000 | | |
| 0544 | 396F | 85B | 0 | 75 | 89FH | 897F | | SUB | OPTIM | | A2. | FIGURE DRUM ROLL |
| 0545 | 897F | 388 | 0 | 60 | BJFB | 898F | | STA | TEMP | | | |
| 0546 | 898F | 888 | 0 | 25 | 0008 | 899F | | LDA | RL | | | |
| 0547 | 899F | 858 | 0 | 35 | B876 | 8877 | | ERS# | 00000 | 0H000 | | |
| 0548 | 8877 | 888 | 0 | 30 | BOAB | 3878 | | LDL | HS81 | | | |
| 0549 | 8878 | 888 | 0 | 82 | 8879 | 8880 | | TEQ | 1F | | | |
| 0550 | 8880 | 888 | 0 | 30 | BJFB | 8881 | | LDL | TEMP | | | |
| 0551 | 8881 | 888 | 0 | 85 | 8882 | 8883 | | MUL# | 00000 | 0A005 | | |
| 0552 | 8883 | 888 | 0 | 30 | 0000 | 8884 | | LOL | RX | | A3. | CHECK BAD TIMING. |
| 0553 | 8884 | 888 | 0 | 25 | 8885 | 8886 | | LDA | | 2F | - | |
| 0554 | 8885 | 888 | ٥ | 99 | OAOO | 0000 | | CON | 990A0 | 00000 | | |
| 0555 | 8879 | | 0 | 25 | BJFB | 8887 | 1 | LDA | TEMP | | | |
| 0556 | 3887 | 888 | 0 | 35 | 8888 | 3889 | | ERSA | 00000 | 000CH | | |
| 0557 | 8889 | 888 | 0 | 77 | 8889 | 8890 | | ATL | | | | |
| 0558 | 8890 | 888 | 0 | 70 | 89FH | 3891 | | ADD | OPTIM | | | |
| 0559 | 8891 | | 0 | 60 | 84FB | 3892 | | STA | TEMP1 | | | |
| 0560 | 5892 | | 0 | 25 | 8893 | 3886 | | LDA | | 2F | | |
| 0561 | 8893 | | | 00 | 0000 | 0048 | | CON | 00000 | 00048 | | |
| 0562 | 8886 | | 0 | 87 | 8894 | 8895 | 2 | TGR | 15 | | | |
| 0563 | 8895 | | | 25 | 8896 | 8897 | | LDAS | 00000 | AOUOA | | |
| 0564 | 8897 | | | 05 | 8894 | 8760 | | LDX | 1F | ERR2* | | |
| 0565 | 8894 | | | 25 | 84FB | 898 | 1 | LDA | TEMPI | | | |
| 0566 | 5898 | | | 35 | 8899 | BOFB | | ERS | | EXIT | | |
| 0567 | 8899 | 888 | 0 | 00 | 0000 | ОННН | | COM | 00000 | ODHHH | | |
| | | | | | | | | | | | | |

- O. OUTPUT SUBROUTINE.
- 01. TRANSFER
- 02. BUFFER FULL
- 03. WRITE TAPE

THIS IS AN EDITING SUBROUTINE WHICH TAKES A TEN DIGIT WORD IN RA AND PRODUCES IN COMPUTER CODE THE CONVENTIONAL NOTATION FOR UNDIGITS: ABCFGH. THE ZONE WORD IS PUT INTO RA. NUMERIC IN RX AT EXIT.

| 0600 | | | 4203 START | CLA 1F | E. | EDIT INPUT CARD. |
|--------|---------------------|---------|------------|------------|--------|-----------------------|
| - 0601 | | 16 4203 | 4203 STRT | CLA 1F | | |
| 0602 | 4203 88B 0 6 | O BOFG | 4207 1 | STA R | | |
| 0603 | | O B9FC | 4211 | STA SIGN | | |
| 0604 | 4211 89B 0 6 | O BOFB | 4215 | STA ERROR | | |
| 0605 | 4215 888 0 2 | 9 B001 | 4220 | LDA1 BQ01 | | |
| 0606 | 4220 888 0 -0 | 5 000A | 4224 | LDX RA | | |
| 0607 | 4224 898 0 7 | | 4029 | SUB LINE | | |
| 0608 | 4029 888 0 3 | | 4233 | | 00001 | |
| 0609 | 4233 688 0 8 | | 4236 | TEQ 1F | | |
| 0610 | 4236 888 0 6 | | 4036 | | 1F | |
| 0611 | 4036 888 0 6 | | 4040 1 | STX LINE | _ | |
| 0618 | 4040 BBB 0 2 | | 4045 | LDA1 8003 | Ei | . CHECK LINE NO. |
| 0619 | | | 4400 | LDX1 8009 | | |
| 0620 | 4400 888 0 3 | | 4208 | SHR 0500 | | |
| 0621 | 4208 898 0 2 | | 4212 | | 00000 | |
| 0622 | 4212 898 0 6 | | 4436 | STA 0334 | | • |
| 0623 | 4436 888 0 2 | | 4240 | LDA RX | E2 | . TRANSFER |
| 0624 | 4240 858 0 2 | | 4044 | | 80000 | |
| 0625 | 4044 888 0 6 | | 4420 | STA 0218 | | |
| 0626 | 4420 888 0 2 | | 4225 | LDA1 8002 | | |
| 0627 | 4225 888 0 C | | 4230 | LDX1 8008 | | |
| 0628 | 4230 BBB 0 3 | | 4038 | SHR 0500 | | |
| 0629 | 4038 888 0 6 | | 4041 | STA 0339 | | |
| 0630 | | | 4425 | STX 0223 | | |
| 0631 | | | 4430 | LDA1 8007 | | |
| 0632 | | | 4234 | SUF# 00000 | 0000g | |
| 0633 | 4234 888 0 0 | | 4039 | FDX1 8009 | 0000 | |
| 0634 | 4039 888 0 | | 4043 | STA 0241 | | |
| 0635 | 4043 888 0 6 | | 4048 | STX 0246 | | |
| 0636 | 4048 888 0 2 | | 4403 | LDA1 8005 | | |
| 0637 | 4403 888 0 | | 4407 | | 00008 | |
| 0638 | 4407 888 0 0 | | 4412 | LDX1 5004 | 0000 | |
| 0639 | 4412 BBB Q | | 4405 | STA 0303 | | |
| 0640 | 4405 BBB 0 | | 4410 | STX 0308 | | |
| 0641 | 545 6 | | 4420 | ннн с | | |
| 0642 | 4410 888 1 0 | 2 0000 | a938 | | -ST £3 | . SEPARATE OFF R. H. |
| 0643 | 8938 888 0 2 | | 8940 -ST | LDA1 8003 | | . SELANATE OFF MY THE |
| 0644 | 8940 888 0 0 | | 8941 | CLX | | |
| 0645 | 8941 88B 0 3 | | 3942 | SHR 0500 | | |
| 0646 | 8942 888 1 6 | | 8943 | STA2 30000 | | |
| 0647 | 8943 888 0 2 | | 8944 | LDA R | | |
| 0648 | 8944 BBB 0 3 | | 8945 | SHP 0900 | | |
| 0649 | 8945 BBB 0 6 | | 8946 | STX R | | |
| 0650 | 8946 888 0 0 | | 8947 | čĽX . | | |
| 0651 | 8947 888 0 3 | | 8948 | SHR 0700 | | |
| 0652 | 8948 888 1 6 | | 3949 | STA2 AH | | |
| 0653 | 8949 888 0 2 | | a950 | LDA1 8002 | | |
| 0654 | 8950 888 0 3 | | 8952 | | 00000 | |
| · | michael Company A 2 | | M 7.4% | Zuen udunu | | |
| | | | | | | |

| - | - - | | | | |
|--------|----------------|---------|--------------|------------|-------------------------|
| 0655 | 8952 888 1 | 60 8700 | 8953 | STA2 30001 | |
| 0656 | 8953 888 1 | 20 8699 | a 954 | BUF2 30000 | |
| 0657 | 8954 888 1 | 60 a706 | 3955 | STA2 A | |
| 0658 | 8955 888 0 | | 3956 | LDA1 8002 | |
| - 0659 | 8956 888 0 | | 8957 | SHL 0400 | |
| 0660 | 8957 888 0 | | 8959 | | 0000 |
| 0661 | 8959 888 1 | | 3960 | BUF2 AH | |
| 0662 | 8960 888 1 | | 8961 | STA2 AH | |
| 0663 | 8961 888 0 | | 3962 | IIR1 0002 | |
| 0664 | 8962 888 1 | | 8963 | IIR2 0002 | |
| 0665 | 8963 888 0 | | 8938 | ADD -S | ST . |
| 0666 | 8964 888 0 | | 2000 | , | 0000 |
| 0667 | | | | ннн н | |
| 0668 | 8939 888 0 | 29 B004 | 4244 AST | LDA1 BOO4 | E4. MOVE COMMENTS |
| 0669 | 4244 888 Q | | 4248 | STA ROODO | |
| 0670 | 4248 89B 0 | | 4603 | LDA1 BOOS | |
| 0671 | 4603 BBB 0 | | 4607 | | 0000 |
| 0672 | | | 4411 | STA ROODI | |
| 0673 | | | 4016 | LDA1 8006 | |
| 0674 | 4016 888 0 | | 4620 | STA R0002 | |
| 0675 | 4620 888 Q | 29 8007 | 4625 | LDA1 8007 | |
| 0676 | 4625 888 0 | 60 8672 | 4229 | STA R0003 | |
| 0677 | 4229 888 0 | | 4434 | LDA1 8008 | |
| 0678 | 4434 888 Q | | 4238 | STA ROOO4 | |
| 0679 | 4238 88B 0 | | 4243 | LDA1 8009 | |
| 0680 | 4243 888 0 | | 4047 | STA ROODS | |
| 0681 | 4047 BBB 0 | | 4202 | LDA1 5010 | |
| 0682 | 4202 888 0 | | 4206 | STA ROOD6 | |
| 0683 | 4206 888 0 3 | | 4611 | LDA1 8011 | |
| 0684 | 4611 888 0 | | 4415 | STA ROOO7 | |
| 0685 | 4415 888 0 | | 4070 | LDA1 B012 | |
| 0686 | 4070 888 0 | _ | 4424 | STA ROOGS | |
| 0687 | 4424 888 0 3 | | 4429 | LDA1 8013 | |
| 0658 | 4429 888 0 (| | 4433 | STA R0009 | |
| 0689 | 4433 888 Q 2 | | 4037 | LDA 30002 | |
| 0690 | 4037 888 0 | | 4245 | SHL 0500 | E5. CONSTRUCT CONSTANTS |
| 0691 | 4245 888 0 | | 4049 | BUF 30004 | |
| 0692 | 4049 BBB 0 | | 4053 | STA NON | |
| 0693 | 4053 BBB 0 2 | | 4057 | LDA 30005 | |
| 0694 | 4057 888 0 (| | 4610 | CLX | |
| 0695 | 4610 888 0 | | 4018 | SHR 0500 | |
| 0696 | 4018 888 0 | | 4222 | BUF 30003 | |
| 0697 | 4222 BBB 0 | | 4026 | STA HCZ | |
| 0698 | 4026 888 0 3 | | 4630 | | 111 |
| 0699 | 4630 888 0 | | 4235 | ADD RA | |
| 0700 | 4235 88B 0 1 | 0 | 4440 | ADD RA | |
| 0701 | 4440 888 0 | | 4444 | BUF MCN | |
| 0702 | 4444 BBB 0 (| | 4448 | STA MC | |
| 0703 | 4448 888 0 | | 4253 | LDA1 BOOJ | |
| 0704 | 4253 88B 0 (| 06 4406 | 4406 | CLX | EG. EDIT OF CODE. |
| | | | | | |

| - | | | - | | | | | | | | |
|---|------|------|-------|----|------|------|----------------|------------|-----------|-------------|---|
| | 0705 | 4406 | 888 0 | 32 | 0700 | 4216 | | SHR 0700 | | | |
| | 0706 | 4216 | 888 0 | | OOOA | 4270 | | LDL RA | | | |
| | 0707 | 4270 | 85B 0 | | 8002 | 4075 | | LDA1 BOO2 | | | |
| | 0708 | 4075 | 858 0 | | 0700 | 4435 | | SHR 0700 | | | |
| | 0709 | 4435 | 888 0 | | 0500 | 4443 | | SHL 0500 | | | |
| | 0710 | 4443 | 888 0 | | 8000 | 4247 | | BUF RL | | | |
| | 0711 | 4247 | 888 0 | | 4249 | 4401 | | BUF# 88000 | 88000 | | |
| | 0712 | 4401 | 858 0 | | BSFG | 4055 | | STA OP | 2000 | | |
| | 0713 | 4055 | 888 0 | | 86FG | 4209 | | STX IR | | | |
| | 0714 | 4209 | 398 0 | | 0014 | 4213 | | 11R1 0014 | 2F | | |
| | 0715 | 4213 | 888 0 | | B7FG | 4017 | 2 | STA TAPEL | m.r | 57 . | INPUT BUFFER EMPTY |
| | 0716 | 4017 | | 29 | 8000 | 4422 | _ | LDA1 BOOO | | 410 | THE OF DOLLARY CHAIL |
| | 0717 | 4422 | 888 0 | | 4275 | 4275 | | CLL | | | |
| | 0718 | 4275 | 888 0 | | 4228 | 4428 | | TEG 6F | | | |
| | 0719 | 4428 | 888 0 | | 8001 | 4633 | | FDX1 BOOT | | | |
| | 0720 | 4633 | 888 0 | | 0000 | 3919 | | LDL RX | TSUB* | FA. | SWAP BUFFERS |
| | 0721 | 8201 | 888 0 | | 0300 | 4218 | 50200 | TRD ITAPL | 1000* | ~~ | SAME BOLLEVA |
| | 0722 | 4218 | 888 0 | | 0201 | 4221 | | LIR1 0201 | | | |
| | 0723 | 4221 | | 25 | 4223 | 4475 | | LDA TONI | 1F | | |
| | 0724 | 4223 | | F6 | 8001 | 4453 | TCON1 | TBU 50000 | -5 | | |
| | 0725 | 4454 | 888 0 | | 8888 | 4453 | 45 | HLT 8888 | -5 | | |
| | 0726 | 4453 | | 60 | 8200 | 4257 | -5 | STA 50199 | 3F | | |
| | 0727 | 8402 | 888 0 | | 0300 | 4019 | 60200 | TRD ITAP1 | • | | |
| | 0728 | 4019 | | | 0000 | 4622 | | LIR1 0000 | | | |
| - | 0729 | 4622 | | | 4624 | 4475 | | LDA TCON2 | 1F | | |
| | 0730 | 4624 | 898 0 | | 8202 | 4653 | TCON2 | TBU 60000 | -6 | | |
| | 0731 | 4654 | 88B 0 | | 8888 | 4653 | & 6 | HLT 8888 | -6 | | |
| | 0732 | 4653 | 888 0 | | 8401 | 4257 | -6 | STA 60199 | 3F | | |
| | 0733 | 4257 | 888 0 | 31 | 4060 | 4060 | 3 | CLL 3F | | | |
| | 0734 | 4475 | 888 0 | 60 | BBFG | 4629 | 1 | STA TCONT | | | |
| | 0735 | 4629 | 888 C | OG | 0000 | 4083 | | IIR1 0000 | | | |
| | 0736 | 4083 | 888 0 | 60 | B7FG | 4228 | | STA TAPEI | 6F | | • |
| | 0737 | 8919 | 888 0 | 50 | BOFH | 4423 | TSUB* | STL TEXI | | | TAPE SUBROUTINE. RL IS EXIT. RX IS TAPE INST. |
| | 0738 | 4423 | 888 0 | | BIFH | 4027 | | STX TEX | 1F | | _ |
| | 0739 | 4027 | | C7 | 4432 | 4027 | 1 | TBT | * | | WAIT UNTIL PREV TAPE INSTRUCTION CLEARS. |
| | 0740 | 4432 | 888 Q | 26 | 4635 | 4635 | | CLA | | | |
| | 0741 | 4635 | 858 0 | | 4438 | 4638 | | TEQ 2F | | | |
| | 0742 | 4638 | 858 0 | | B9FG | 4242 | | LDA LTAPE | | | |
| | 0743 | 4242 | 888 0 | | 2222 | ACCC | | HLT 2222 | AA | | HALT IF INDICATOR LIGHT ON |
| | 0744 | 4438 | 888 0 | | Bafg | 4442 | 2 | LDA TCONT | | | |
| | 0745 | 4442 | 888 0 | | 4445 | 4445 | | CLL | | | IF PRECEDING WAS A READ. UNLOAD BUFFER |
| | 0746 | 4445 | 888 0 | | 4060 | ADDG | | TEO 3F | RA | | |
| | 0747 | 4060 | 888 0 | | Bafg | 4402 | 3 | STL TCONT | | | PUT NEXT TAPE INSTRUCTION INTO LTAPE |
| | 0748 | 4402 | 888 0 | | BIFH | 4606 | | LDA TEX | | | |
| | 0749 | 4606 | 888 0 | | 4408 | 4260 | | ERS# HHHHH | H0000 | | |
| | 0750 | 4260 | 888 0 | | 4612 | 4214 | | BUF | aF | | |
| | 0751 | 4612 | 888 0 | | 0000 | 4027 | _ | JMP 0000 | 18 | | |
| | 0752 | 4214 | 888 0 | | 89F6 | BOFH | 8 | STA LTAPE | TEX 1 | | |
| | 0753 | 4228 | 888 0 | | B5FG | 4632 | 6 | LDL OP | *** | E9, | OP SRCH*. |
| | 0754 | 4632 | 888 0 | 25 | 4634 | 4636 | | LDA# 88220 | 88658 | | |
| | | | | | | | | | | | |

| 0755 | 4636 | 888 | 0 | 82 | 4239 | 4439 | | TEQ | ONN | SWICH |
|------|------|-----|---|----|------|------|------|------|-------|--------|
| 0756 | 4056 | 888 | 1 | 08 | 0006 | 4409 | ONSW | LIRS | 0000 | |
| 0757 | 4409 | 888 | 0 | 05 | 4061 | 4413 | | LDX | 15 | |
| 0758 | 4413 | 898 | 0 | 25 | 4615 | 3712 | | LDA | • | SRCH* |
| 0759 | 4615 | 888 | Ü | 30 | 4219 | 8736 | | LDL | | ERR 1* |
| 0760 | 4219 | 888 | 0 | 25 | 4623 | 4675 | | | 67220 | 00000 |
| 0761 | 4675 | 888 | 0 | 64 | 2000 | 4061 | | STAI | ETAB | 1F |
| 0762 | 4061 | 888 | Ō | 30 | 4613 | 4065 | 1 | | CCCCC | 2222 |
| 0763 | 4065 | 888 | 0 | 87 | 4418 | OOOA | | TGR | | RA |
| 0764 | 4418 | 888 | 0 | 60 | BSFG | 4072 | | STA | OP | |
| 0765 | 4072 | 885 | a | 30 | 4074 | 4226 | | LDL | PROCM | PROCA |
| 0766 | | | | | - | | | ннн | | Н |

| 0767 | 4226 | 888 | | 08 | 0000 | 4079 | PROCA | LIRJ | | | L. | PROCESS A ADDRESS. |
|--------------|--------------|-----|---|------------|--------------|--------------|----------|-------------|------------|----------|------|--------------------|
| 0768 0769 | 4079 4283 | | | 50 25 | BZFH | 4283 | | STL | AEX | | | |
| 0770 | 4237 | | | 30 | 8706 4639 | 4237 4241 | | LDA LDL# | A 00000 | 22250 | | CUECU DI ANK A |
| 0771 | 4241 | | | 82 | 4644 | 4094 | | | | 88688 | C1. | CHECK BLANK A |
| 0772 | 4094 | | | 31 | 4447 | | | TEQ | 1F | | | |
| 0773 | 4447 | | | | | 4447 | | CLL | me Ablic | | | |
| 0774 | 4601 | | | 25 | 84FC | 4601 | | LDA | BLANK | | | |
| 0775 | 4204 | | | 82 30 | 4644 | 4204 | | TEO | 1F | CD014 | | |
| 0776 | 4644 | | | 05 | | 8736 | • . | LDL | 1F | ERR1* | 1.4 | ETMOL A |
| 0777 | 4600 | | | | 4648 | 4600 | 1 | LDX | 2 F | # Taika | L2+ | FINO* A. |
| 0778 | 4602 | | | 30 | 4602 | 8810 | | LDL | | FIND* | | |
| - 0779 | 4010 | | | 00 | 4010 | 4010 | 1.0000 | | L0000 | 1.0000 | | |
| - 0780 | 4011 | | _ | | 0005 | 4012 | L0000 | LIR2 | | L0002 | | |
| 0781 | 4012 | | | 02 30 | 0002 | 4012 | L0001 | LIR2 | 0002 | L0002 | | |
| 0782 | 4013 | - | | | 4014 | 8736 | L0002 | LDL | L0004 | ERR1* | . ** | PIRAL RECHE |
| - 0783 | 4014 | | | 25 25 | BIFG | 4217 | L0003 | LDA | LINE | 1F | 63. | FARB* DEFN*. |
| - 0784 | 4015 | | | | BIFG | 4217 | L0004 | LDA | LINE | 1F | | |
| 0785 | 4217 | | | 25 30 | 81FG 4419 | 4217 8723 | L0005 | LDA | LINE | 15 | | |
| 0786 | 4419 | | | 3 0 | 4648 | 3861 | 1 | LDL | 20 | FAR8+ | | |
| 0787 | 4648 | | | 60 | 85FC | 4404 | 2 | LDL | 2F ALOC | DEFN* | | |
| 0788 | 4404 | | | 30 | BOFC | 4608 | • | | MLOC | | | |
| 0789 | 4608 | | | 82 | | | | LDL | | | 4 24 | An EIST A LEVEL |
| 0790 | 4461 | | | | 4261 | 4461 | | TEO | 3F | | 64. | ADJUST A LEVEL. |
| 0791 | | | | 30 | B7FC | 4265 | | LDL | CLOC | | | |
| 0792 | 4265 | | | 82 | 4618 | 4068 | # | TEQ | 45 | 2F | | |
| 0793 | 4618 4261 | | | 25 | BSFH | 4272 | 4 3 | LDA | CLEV | 1F | | |
| 0794 | 4465 | | | 30 | B7FC | 4465 | , | LDL | CLOC | 8F | | |
| 0795 | 4417 | | | 25 | 4417 | 4619 | | LDA | ~~~~ | | | |
| 0796 | | | | 00 | 0000 | 0000 | • | CONI | | 00000 | | |
| 0797 | 4619 | | | 70 | 0008 | 4274 | 8 | ADD | RL | 5 | | |
| 0798 | 4274 | | | 82 | 4227 | 4618 | | TEO | MI EN | 48 | | |
| 0799 | 4227 4272 | | | 25 60 | 84FH | 4272 | • | LDA | MLEV | 15 | | |
| 0800 | 4426 | | | | BJFH | 4426 | 1 | STA | ALEV | | . 12 | TERO TO DI ANIE |
| 0801 | 4279 | | | 31 | 4279 | 4279 | | CLL | DI ANY | AEV | LJ | ZERO TO BLANK. |
| 0804 | 4068 | | | 50 25 | 84FC 4470 | 82FH | 2 | STL | BLANK | AEX | | |
| 0805 | 4470 | 888 | | 00 | | 4472 | « | LDA | 00000 | 8F | | |
| 0806 | 4472 | | | | 0000 | 0000 | | | 00000 | 00000 | | |
| 0000 | 47/2 | 888 | U | 70 | 85FC | 4272 | 8 | ADD | ALOC | 18 | | |

| | | | | • | | | | | | | | | |
|------|---------------|-----|----------|-----|------|----------------|-------|---|------|--------------|-------------------------|-------------|----------------------------|
| 0807 | 4074 | 888 | | | BOFG | 4628 | PROCM | | LDA | IR | 50005 | p. | PROCESSING OF INSTRUCTIONS |
| 0808 | 4628 | 888 | | | 4080 | 4082 | | | LDL# | 00000 | 00800 | Pl. | PROCESS A |
| 0809 | 4082 | 888 | | | 4085 | 4285 | | | TEO | 1F | | | |
| 0810 | 4285 | 888 | 0 | .30 | 4437 | 4089 | | | LOL# | 10000 | 0 0 H 0 0 | P2. | CALCULATE M OPTIM |
| 0811 | 4089 | 888 | 0 | 82 | 4085 | 4642 | | , | TEG | 15 | | | |
| 0813 | 4642 | 888 | 0 | .25 | 83FH | 4046 | | | LDA | ALEV | | | |
| 0813 | 4046 | 888 | 0 | -70 | 4098 | 4051 | | | ADD# | 00000 | 00001 | | |
| 0814 | 4051 | 888 | ۵ | 60 | BJFH | 4085 | | | STA | ALEV | 1F | | |
| 0815 | 4085 | 888 | | | BSFG | 4289 | 1 | | LDA | OP | - | | |
| 0816 | 4289 | 888 | | | 0200 | 4294 | | | SHR | 0200 | | | |
| 0817 | 4294 | 888 | | | 4246 | 4298 | | | ERS# | 00000 | 000HH | | |
| 0818 | 4298 | 888 | - | | BJFH | 4103 | | | ADD | ALEV | | | |
| 0819 | 4103 | 888 | | | BOFH | 4457 | | | STA | OPTIM | | | |
| 0820 | 4457 | 888 | | | 0002 | 4460 | | | LIRJ | | | | |
| 0821 | 4460 | 888 | | | BOFG | 4414 | | | LDA | IR | | | |
| 0822 | 4414 | 888 | | | 4416 | 4268 | | | LDL# | 10000 | 00400 | 23. | LITERAL |
| 0823 | 4268 | 888 | | | 4421 | 4621 | | | TEO | 5F | 00(100 | • ,5• | C11C176 |
| 0824 | 4621 | 888 | | | 0200 | 4626 | | | SHL | 0200 | | | |
| 0825 | 4626 | 888 | | | 4479 | 4479 | | | CLL | 0200 | | | |
| 0826 | 4479 | 858 | | | | 4282 | | | | | | | |
| 0827 | | | | | 4282 | | | | CLX | 15 | RA | 5 /1 | FIGURE INDEXING |
| | 4282 | 888 | | | 4084 | 000A | • | | ADD | 3F | | F4. | FIGURE INDEXTING |
| 0828 | 4084 | 888 | _ | | 4000 | 4052 | 3 | | LDA | 20000 | 4F | | |
| 0829 | 4000 | | | 00 | 0000 | 0000 | 90000 | | CON | 00000 | 00000 | | |
| 0830 | 4001 | | | 40 | 0000 | 0000 | 00001 | | CON | 40000 | 00000 | | |
| 0831 | 4002 | 888 | | | 0000 | 0001 | 00002 | | CON | 00000 | 00001 | | |
| 0832 | 4003 | 888 | | | 0000 | 0001 | E0000 | | CON | 40000 | 00001 | | |
| 0833 | 4004 | 888 | | | 0000 | 0002 | 00004 | | CON | 00000 | 00002 | | |
| 0834 | 4005 | | | 00 | 0000 | 0003 | Q0005 | | CON | 00000 | 00003 | | |
| 0835 | 4006 | 888 | | | 0000 | 0005 | 00006 | | CON | 00000 | 00005 | | |
| 0836 | 4007 | 688 | | 00 | 0000 | 0006 | 20007 | | CON | 00000 | 00006 | | |
| 0837 | 4008 | 898 | | | 0000 | 0007 | 80008 | | CON | 00000 | 00007 | | |
| 0838 | 4009 | 888 | | | 0000 | 0008 | 00009 | | CON | 00000 | 00008 | | |
| 0839 | 4052 | | | 60 | B9FC | 4256 | 4 | | STA | SIGN | | | |
| 0840 | 4256 | 888 | | | 0100 | 4660 | | | SHR | 0100 | | | |
| 0841 | 4660 | 888 | | | 85FG | 4614 | | | BUF | OP | | | |
| 0842 | 4614 | 888 | | | 85FG | 4468 | | | STA | OP | PRCM1 | | |
| 0843 | 4421 | 888 | | 25 | 89FH | 4125 | 5 | | LDA | OPTIM | | P5. | CREATE CONSTANT |
| 0844 | 4125 | 356 | | 30 | 4427 | 8723 | | | LDL | | FARB* | | |
| 0845 | 4427 | 858 | 0 | 60 | Befc | 4483 | | | STA | MLOC | | | |
| 0846 | 4483 | 888 | 0 | 30 | 4485 | 8871 | | | LDL | | AJST+ | | |
| 0847 | 4485 | 898 | 0 | 60 | 84FH | 4441 | | | STA | MLEV | | | |
| 0848 | 4441 | 888 | 0 | 25 | BOFC | 4645 | | | LDA | MLOC | | | |
| 0849 | 4645 | 898 | | | 0800 | 4456 | | | SHR | 0800 | | | |
| 0850 | 4456 | 888 | | | BOFG | 4110 | | | LDA | R | | | |
| 0851 | 4110 | 888 | | | 4062 | 4064 | | | | 00000 | 000H0 | | |
| 0852 | 4064 | 888 | | | 0200 | 4069 | | | SHR | 0200 | | | • |
| 0853 | 4069 | 888 | | | 84FG | 4073 | | | LDA | MC | | | |
| 0854 | 4073 | 888 | | | 4325 | a900 | | | LDL | | OTPT* | | |
| 0855 | 4325 | 888 | | | 4679 | 4431 | | | | 00000 | 88888 | | |
| | - | | - | | | - - | | | | - | | | |
| | | | | | | | | | | | | | |

| 0856 | 4431 | 898 | | 60 | 8710 | 4685 | | STA | C | PROCC | | |
|--------|------|-----|---|----|------|------|-------------|------|-------|------------|-----|-------------------|
| 0857 | 4468 | 898 | 0 | 05 | 4670 | 4672 | PRCM1 | LDX | 2F | | P6. | FIND* M. |
| 0858 | 4672 | 888 | 0 | 30 | 4474 | 9810 | | LDL | | FIND* | | |
| 0859 | 4474 | 988 | 0 | 31 | 4129 | 4129 | | CLL | | | | |
| 0860 | 4129 | 886 | 1 | 00 | 4020 | 4020 | | JMP2 | M0000 | | | |
| 0861 | 4022 | 858 | 0 | 25 | BSFG | 4076 | M0002 | LDA | OP | | P7. | FARB+. DEFN+. |
| 0862 | 4076 | 888 | 0 | 35 | 4078 | 4280 | | ER5# | 00020 | 00000 | | |
| 0863 | 4280 | 888 | | 82 | 4021 | 4683 | | TEQ | M0001 | | | |
| 0864 | 4683 | | | 25 | BSFC | 4670 | | LDA | ALOC | 2F | | |
| 0865 | 4020 | 388 | | 30 | 4122 | 8736 | M0000 | LDL | 15 | ERR1+ | | |
| 0866 | 4023 | 888 | | 30 | 4122 | 8736 | M0003 | LDL | 15 | ERR1* | | |
| 0867 | 4122 | 888 | 0 | 26 | 4670 | 4670 | 1 | CLA | 25 | | | |
| 0868 | 4025 | 858 | _ | 25 | 89FH | 4329 | M0005 | LDA | OPTIM | 1F | | |
| 0869 | 4024 | 888 | | 25 | BOFH | 4329 | M0004 | LDA | OPTIM | 1F | | |
| 0870 | 4021 | 356 | ٥ | | B9FH | 4329 | M0001 | LDA | OPTIM | 15 | | |
| 0871 | 4329 | 558 | | 30 | 4631 | 8723 | 1 | LDL | | FARB# | | |
| 0872 | 4631 | 888 | | 30 | 4670 | 8861 | - | LDL | 2# | DEFN* | | |
| 0873 | 4670 | 888 | | 60 | BOFC | 4276 | 2 | STA | MLOC | | P8. | ADJUST M LEVEL |
| 0874 | 4276 | 888 | | 30 | 4278 | 8871 | | LDL | | AJST* | | |
| 0875 | 4278 | 888 | | 60 | B4FH | 4685 | | STA | MLEV | PROCC | | |
| 0876 | 4685 | 888 | | 25 | BSFG | 4489 | PROCC | LDA | OP | | | |
| 0877 | 4489 | 388 | | 35 | 4641 | 4643 | . ,,,,,,,, | ERS# | 00H00 | 00000 | | |
| 0878 | 4643 | 888 | | 70 | 4095 | 4498 | | ADD | | -C1 | | |
| 0879 | 4095 | 888 | - | 99 | 7000 | 0000 | | CON | 99700 | 00000 | | |
| 0880 | 4499 | 858 | | 25 | BSFC | 4303 | &C1 | LDA | MLOC | | P9. | CALCULATE C OPTIM |
| 0881 | 4303 | 898 | | 30 | 4255 | 4657 | | LDL# | 00000 | 00F00 | | |
| 0882 | 4657 | 888 | | 82 | 4310 | 4510 | | TEQ | | 1F | | |
| 0883 | 4310 | 888 | Õ | 25 | 4262 | 4510 | | LDA | | if | | |
| 0884 | 4262 | 886 | 0 | 00 | 0000 | 1000 | | CON | 00000 | 01000 | | |
| 0885 | 4510 | 888 | 0 | 06 | 4063 | 4063 | 1 | CLX | | | | |
| 0886 | 4063 | 888 | 0 | 32 | 0200 | 4668 | | SHR | 0200 | | | |
| 0887 | 4668 | 888 | 0 | 70 | BSFG | 4273 | | ADD | OP . | | | |
| 0888 | 4273 | 888 | 0 | 60 | BSFG | 4477 | | STA | OP | ac2 | | |
| 0890 | 4498 | 888 | 0 | 30 | 4251 | 4503 | -C1 | LDL# | 99800 | 00000 | | |
| 0891 | 4503 | 888 | 0 | 82 | 4656 | 4106 | | TEO | | 3F | | |
| 0892 | 4656 | 888 | 0 | 25 | 85FG | 4710 | | LDA | OP | | | |
| 0893 | 4710 | 888 | 0 | 35 | 4462 | 4264 | | ERS | | 2 F | | |
| 0894 | 4462 | 888 | 0 | 00 | 0000 | HHHH | | CON | 00000 | OHHHH | | |
| 0895 | 4106 | 888 | 0 | 70 | 4058 | 4476 | 3 | ADD | | -C2 | | |
| 0896 | 4058 | 898 | 0 | 00 | 1000 | 0000 | | CON | 00100 | 00000 | | |
| 0897 | 4477 | 888 | 0 | 30 | BJFH | 4081 | 8 C2 | LDL | ALEV | 3F | | |
| 0898 | 4476 | 888 | 0 | 30 | BAFH | 4081 | -C2 | LDL | MLEV | 3F | | |
| 0899 | 4081 | 888 | 0 | 25 | 85FG | 4135 | 3 | LDA | OP | | | |
| 0900 | 4135 | 888 | 0 | 35 | 4637 | 4689 | | ERS# | 00000 | HHOOO | | |
| 0901 | 4689 | 888 | 0 | 70 | 0008 | 4264 | | ADD | RL | 2F | | |
| 0902 | 4264 | 888 | 0 | 60 | BOFH | 4118 | 2 | STA | OPTIM | | | |
| 0903 | 4118 | 888 | 1 | 08 | 0004 | 4071 | | LIRS | 0004 | | Plo | .FIND* C. |
| 0904 | 4071 | 888 | 0 | 05 | 4473 | 4525 | | LDX | 2F | | | |
| 0905 | 4525 | 888 | | 30 | 4627 | 8810 | | LDL | _ | FIND* | | |
| - 0906 | 4627 | 888 | 1 | 00 | 4030 | 4030 | | JMP2 | C0000 | | | |
| | | | | | | | | | | | | |

| | | - | | | | | | | |
|------|------|----------|------|------|---------|--------|------------|-------------|--------------------|
| 0907 | 4033 | 888 0 30 | 4335 | 8736 | C0003 | LDL | 1F | ERR1* | P11.FARB+.DEFN+. |
| 0908 | 4030 | 888 0 30 | 4335 | 8736 | C0000 | LDL | 1F | ERR1* | |
| 0909 | 4335 | 888 0 26 | | 4473 | 1 | CLA | 2 F | | |
| 0910 | 4032 | 888 0 25 | | 4086 | Ċ0002 | LDA | ÔP | | |
| 0911 | 4086 | 388 0 35 | | 4640 | - | ERS# | 00010 | 00000 | |
| 0912 | 4640 | 888 Q 31 | | 4093 | | CLL | 00000 | | |
| 0913 | 4093 | 888 0 82 | | 4646 | | TEQ | 1F | | |
| 0914 | 4646 | 888 0 25 | | 4473 | | LDA | MLOC | 2F | |
| 0915 | 4446 | 88B 0 07 | | 4449 | 1 | IIR | 0010 | 41 | |
| 0916 | 4449 | 888 0 70 | | 4604 | • | ADD | FUNNY | | |
| 0917 | 4604 | 888 Q 30 | | 4258 | | LOL# | 00199 | 00000 | |
| 0918 | 4258 | 858 0 87 | | 4661 | | TGR | C0001 | 0000 | |
| 0919 | 4661 | 898 0 60 | | 4665 | | STA | FUNNY | | |
| 0920 | 4665 | 888 0 05 | | 4269 | | LDX | RA | | |
| 0921 | 4269 | 858 0 70 | | 4724 | | ADD | NA . | -FNNY | |
| 0922 | 4271 | 888 0 99 | | 0000 | | CON | 99900 | 00000 | |
| 0923 | 4725 | 888 0 20 | | 4529 | &FNNY | BUF | 77700 | 1F | |
| 0924 | 4077 | 888 0 00 | | | at uni | | 00800 | | |
| 0925 | | | | 0000 | _ FAILU | CON | - | F0000 | |
| | 4724 | 858 0 07 | | 4277 | -FNNY | IIR | BOOA | 45 | |
| 0926 | 4277 | 888 0 20 | | 4529 | • | SUF | RX | 1F | |
| 0927 | 4529 | 858 0 32 | | 4286 | 1 | SHR | 0400 | 3F | |
| 0928 | 4035 | 888 0 25 | | 4139 | C0005 | LDA | OPTIM | 1F | |
| 0929 | 4034 | 89B 0 25 | | 4139 | C0004 | LDA | OPTIM | 15 | |
| 0930 | 4031 | 898 0 25 | | 4139 | C0001 | LDA | OPTIM | 1F | |
| 0931 | 4139 | 88B 0 30 | | 8723 | 1 | LDL | 3F | FARB* | |
| 0932 | 4286 | 888 0 30 | | 3861 | 3 | LDL | 2F | DEFN* | |
| 0933 | 4473 | 888 0 60 | | 4729 | 2 | STA | CLOC | | P12.ADJUST C LEVEL |
| 0934 | 4729 | 898 0 30 | | 8871 | | LDL | | *TZLA | |
| 0935 | 4281 | 888 0 60 | | 4087 | | STA | CLEV | SUILD | |
| 0936 | 4087 | 888 0 25 | | 4091 | Bullo | LDA | CLOC | | P13. SYNTHESIZE |
| 0937 | 4091 | 898 0 32 | | 4698 | | SHR | 0400 | | |
| 880 | 4698 | 888 0 25 | | 4252 | | LDA | MLOC | | |
| 0939 | 4252 | 888 0 32 | | 4111 | | SHR | 0600 | | |
| 0940 | 4111 | 888 0 25 | | 4115 | | LDA | OP | | |
| 0941 | 4115 | 888 Q 35 | | 4469 | | ERS# | HH000 | 00000 | |
| 0942 | 4469 | 858 0 20 | | 4673 | | BUF | RX | | |
| 0943 | 4673 | 88B 0 77 | 4673 | 4676 | | ATL | | BILDI | |
| 0944 | 4676 | 888 0 25 | | 4480 | BILDI | LDA | ALOC | | P14.ASSEMBLE |
| 0945 | 4480 | 888 0 06 | | 4133 | | CLX | | | |
| 0946 | 4133 | 888 0 32 | 0500 | 4291 | | SHR | 0500 | | |
| 0947 | 4291 | 888 0 25 | BOFC | 4295 | | LDA | SIGN | | |
| 0948 | 4295 | 888 0 32 | 0200 | 4050 | | SHR | 0200 | | |
| 0949 | 4050 | 888 0 25 | BOFG | 4054 | | LDA | R | | |
| 0950 | 4054 | 888 0 32 | | 4160 | | SHR | 0300 | | |
| 0951 | 4160 | 898 Q 25 | | 4464 | | LDA | RL | | |
| 0952 | 4464 | 88B 0 30 | | 8900 | | LDL | | OTPT* | |
| 0953 | 4616 | 898 0 25 | | 4322 | | LDA | TEMP I | 1F | P15.EDIT |
| 0954 | 4322 | 898 0 05 | | 8920 | 1 | LDX | | UNDG* | |
| 0955 | 4674 | 888 0 65 | - | 4680 | - | STX | TEMP1 | | |
| 0956 | 4680 | 888 0 06 | | 4333 | | CLX | | | |
| | | | | - W- | | ⊕ am., | | | |

| _ | | | | | | | | | | | | |
|---|--------------|------|-----|-----|----|---------------|------|-------------------|------|--------------|-----------|----------------|
| | 0957 | 4333 | 988 | 0 3 | 32 | 0400 | 4090 | | SHR | 0400 | | |
| | 0958 | 4090 | 888 | | | 0200 | 4495 | | SHL | 0200 | | |
| | 0959 | 4495 | | 0 3 | | 0600 | 4254 | | SHR | 0600 | | |
| • | 0960 | 4254 | | 0 | | 0255 | 4107 | | STX | 0255 | | |
| | 0961 | 4107 | 898 | | | 0200 | 4662 | | SHL | 0200 | | |
| | 0962 | 4662 | 888 | | | 83F8 | 4066 | | STA | TEMP | | |
| | 0963 | 4066 | 358 | | | BSFB | 4120 | | LDA | TEMP2 | | |
| | 0964 | 4120 | 888 | | | 4522 | 8920 | | LDX | 1 C | UNDG# | |
| | 0965 | 4522 | 888 | | 55 | BSFB | 4478 | | STX | TEMP2 | Q: Qur | |
| | 0966 | 4478 | 888 | | | 4478 | 4481 | | ATL | 1 5 t. 14. W | | |
| | 0967 | 4481 | 888 | | | 4533 | 4535 | | ERS# | ннннн | H0000 | |
| | 0968 | 4535 | 888 | | | 83F8 | 4339 | | SUF | TEMP | ,,,,,,,,, | |
| | 0969 | 4339 | 888 | | | 0370 | 4722 | | STA | 0370 | | |
| | 0970 | 4722 | 888 | | | 0008 | 4126 | | LDA | RL | | |
| | 0971 | 4126 | 858 | | | 4678 | 4130 | | ERS# | | ОНННН | |
| | 0972 | 4130 | 888 | | | 0200 | 4735 | | SHL | 0200 | Outhout | |
| | 0973 | 4735 | 888 | | | 0286 | 4288 | | STA | 0286 | | |
| | 0974 | 4288 | 888 | | | BSFB | 4092 | | | | | |
| | 0975 | 4092 | 888 | | | 44 9 4 | 4096 | | LDA | TEMP2 | AUGU | |
| | 0976 | 4096 | | 0 3 | | 0200 | 4451 | | ERS# | | ОНННН | |
| | 0977 | 4451 | | 0 2 | | 4703 | 4455 | | SHL | 0200 | AAAB a | |
| | 0978 | 4455 | | 0 | | 0281 | 4733 | | | 88880 | 000Ba | |
| | 0979 | 4733 | | | | _ | | | STA | 0281 | | |
| | 0980 | 4287 | 888 | | | 85F8 | 4287 | | LDA | TEMP2 | 00000 | |
| | 0981 | | | | | 4539 | 4491 | | ER5# | HHHHH | H0000 | |
| | 0982 | 4491 | 888 | | | 4491 | 4694 | | ATL | | | |
| | | 4694 | 888 | | | Bufb | 4148 | | LDA | TEMPI | | |
| | 0983 0984 | 4148 | 888 | | | 4651 | 4651 | | CLX | A#80 | | |
| | 0985 | 4651 | 888 | | | 0400 | 4458 | | SHR | 0400 | | |
| | | 4458 | 888 | | | 0200 | 4263 | | SHL | 0200 | | |
| | 0986 | 4263 | 888 | | | 0600 | 4172 | | SHR | 0600 | | |
| | 0987 | 4172 | 888 | | | 0200 | 4677 | | SHL | 0200 | | |
| | 0988 | 4677 | 898 | | | 0008 | 4681 | | BUF | RL | | |
| | 0989 | 4681 | 888 | | | 4183 | 4185 | | BUF# | 00080 | 80088 | |
| | 0990 | 4185 | 888 | | 50 | 0365 | 4067 | | STA | 0365 | | |
| | 0991 | 4067 | 888 | | | 000C | 4471 | | LDA | RX | **** | |
| | 0992 | 4471 | 888 | | | 4123 | 4175 | | | 00008 | 80000 | |
| | 0993 | 4175 | 888 | | | 0250 | 4452 | - 9 - 9 | | 0250 | ALLX | |
| | 0994 | 0205 | 888 | | | 0000 | 0000 | 0205 | CON | 00000 | 00000 | |
| | 0995 | BJAG | 698 | _ | | 4669 | 4669 | PSUDX | CLX | | | |
| | 0996 | 4669 | 888 | | | 4669 | 4372 | | ZAP | | | |
| | 0997 | 4372 | 388 | | | 0250 | 4652 | | STA | 0250 | | |
| | 0998 | 4652 | 888 | | | 0255 | 4307 | | STX | 0255 | | |
| | 0999 | 4307 | 888 | | | 0281 | 4383 | | STA | 0281 | | |
| | 1000 | 4383 | 888 | | | 0286 | 4488 | | STX | 0286 | | |
| | 1001 | 4488 | 888 | | | 0365 | 4267 | | STA | 0365 | 44 > 54 | |
| | 1002 | 4267 | 888 | | | 0370 | 4452 | 4.45 | STX | 0370 | ALLX | |
| | 1003 | 4452 | 388 | | | 4655 | 4655 | ALLX | CLL | | | P16.FLOW CHART |
| | 1004 | 4655 | 888 | | | 87FH | 4609 | | LDA | FTAG | | |
| | 1005 | 4609 | 898 | | | 4112 | 4312 | ## # \$.1 | TEQ | FIN | FLO# | |
| | 1006 | 4112 | 888 | 0 2 | 25 | 8678 | 4266 | FIN | LDA | R0009 | | |
| | | | | | | | | | | | | |

| | | | - | | | | | | | |
|----------------|--------------|------------|---|-----|------|------|--------|------|-------|-------|
| 1007 | 4266 | 886 | d | 05 | 8677 | 4320 | | LDX | R0008 | |
| 1008 | 4320 | 356 | | | | 4664 | | STA | 0262 | |
| 1009 | 4664 | 898 | - | | | 4119 | | STX | 0267 | |
| 1010 | 4119 | | | .25 | 8674 | 4323 | | LDA | R0005 | |
| 1011 | 4323 | 338 | | 05 | | 4127 | | LDX | R0004 | |
| 1015 | 4127 | 898 | | | | 4296 | | STA | 0294 | |
| 1013 | 4296 | 898 | | | | 4101 | | STX | 0299 | |
| 1014 | 4101 | 886 | 0 | | 8670 | 4105 | | LDA | R0001 | |
| 1015 | 4105 | 888 | 0 | 05 | 8669 | 4059 | | LDX | R0000 | |
| 1016 | 4059 | 888 | | | 0325 | 4327 | | STA | 0325 | |
| 1017 | 4327 | 888 | 0 | 65 | 0330 | 4482 | | STX | 0330 | |
| 1018 | 4482 | 888 | 0 | 25 | 8676 | 4486 | | LDA | R0007 | |
| 1019 | 4486 | 888 | 0 | 05 | 8675 | 4290 | | LDX | R0006 | |
| 1020 | 4290 | | | 60 | 0378 | 4330 | | STA | 0378 | |
| 1021 | 4330 | 356 | | | 0383 | 4385 | | STX | 0383 | |
| 1022 | 4385 | 888 | | 25 | 8672 | 4739 | | LDA | R0003 | |
| 1023 | 4739 | 888 | | _ | 8671 | 4293 | | LDX | R0002 | |
| 1024 | 4293 | 888 | | 60 | 0209 | 4311 | | STA | 0209 | |
| 1025 | 4311 | 888 | | | 0214 | 4466 | | STX | 0214 | |
| 1026 | 4466 | 888 | | 25 | Befs | 4520 | | LDA | ERROR | |
| 1027 | 4520 | 888 | | - | 4523 | 4523 | | CLX | | |
| 1028 | 4523 | 888 | | 62 | 4523 | 4527 | | ZUP | | |
| 1029 | 4527 | 898 | - | - | 0400 | 4284 | | SHL | 0400 | |
| 1030 | 4284 | 888 | _ | | BIFG | 4688 | | BUF | LINE | |
| 1031 | 4688 | 888 | | | 4490 | 4292 | | BUF# | 00000 | 80000 |
| 1032 | 4292 | 898 | _ | | 0200 | 4102 | | STA | 0200 | |
| 1033 1034 | 4102 | 888 | 0 | | BZAC | 4506 | | LDA | LC | |
| 1035 | 4506 | 888 | | | 4658 | 4511 | | ADD | | -PR |
| 1036 | 4658 4511 | 888 888 | 0 | | 9999 | 9951 | | CON | 99999 | 99951 |
| 1037 | 4467 | | 0 | 75 | 4114 | 4467 | -PR | SUB# | 99999 | 99950 |
| 1038 | 4671 | 888 | 0 | 60 | BZAC | 4671 | | STA | LC | |
| 1039 | 4512 | 888 | 0 | 11 | 0201 | 4189 | 5 m 20 | PRN | 0201 | -PRI |
| 1040 | 4666 | 888 | | | BZAC | 4666 | APR | STA | LC | _ |
| 1041 | 4190 | 888 | | 11 | 0217 | 4189 | | PRN | 0217 | -PRI |
| 1042 | 4189 | | | | 3333 | AOOO | &PR1 | HLT | 3333 | RA |
| 1043 | 4493 | 888 | | | B7FG | 4493 | -PR1 | LDA | TAPEI | |
| 1044 | 4695 | 888 | | | 4695 | 000A | | ADD | | RA |
| च च ारण | ママアジ | 000 | v | OB | 0000 | 4200 | | LIRI | 0000 | START |
| | | | | | | | | | | |

P17. PRINT

1045

CONTROL OPS.

| 1095 | 4348 | 888 | 0 | 60 | 4450 | 4302 | | STA | BVAR | | |
|------|------|--------------|---|-----|------|-------------|-------|------|--------|---|-------|
| 1096 | 4302 | 888 | 0 | 25 | 0008 | 4706 | | LDA | RL | | |
| 1097 | 4706 | 888 | 0 | 06 | 4259 | 4259 | | CLX | | | |
| 1098 | 4259 | 888 | 0 | 32 | 0400 | 4116 | | SHR | 0400 | | |
| 1099 | 4116 | 888 | 0 | 75 | 4518 | 4121 | | SUB# | 00000 | | 00001 |
| 1100 | 4121 | 988 | 0 | 60 | 84F8 | 4575 | | STA | TEMP 1 | | 1F |
| 1101 | 4575 | 888 | 0 | 05 | 4177 | 4179 | 1 | LDX | 25 | | FP2ER |
| 1102 | 4179 | 888 | 1 | 08 | 0002 | 4132 | FP2ER | LIRJ | 0002 | | FPERR |
| 1103 | 4177 | 988 | 0 | 60 | BEFC | 4131 | 2 | STA | MLOC | | _ |
| 1104 | 4131 | 888 | 0 | 25 | B710 | 4585 | | LDA | C | | |
| 1105 | 4585 | 888 | 0 | 30 | 4487 | 4389 | | LOL# | 00000 | | 88888 |
| 1106 | 4389 | 888 | 0 | 82 | 4692 | 4142 | | TEG | | | 1F |
| 1107 | 4692 | 888 | 0 | 26 | 4545 | 4545 | | CLA | 3F | | |
| 1108 | 4142 | 888 | 1 | OB | 0004 | 4745 | 1 | LIR3 | 0004 | | |
| 1109 | 4745 | 888 | 0 | 05 | 4647 | 4132 | | LDX | 2F | | FPERR |
| 1110 | 4132 | 8 9 8 | 0 | 30 | 4134 | 8810 | FPERR | LDL | PERR | | FIND* |
| 1111 | 4647 | 888 | 0 | 75 | B6FC | 4545 | 2 | SUB | MLOC | | 3F |
| 1112 | 4545 | 888 | 0 | 60 | 85F8 | 4649 | 3 | STA | TEMP2 | | |
| 1113 | 4649 | 888 | | 25 | 86FC | 4153 | | LDA | MLOC | | 7F |
| 1114 | 4153 | 888 | | -30 | AOOO | 4507 | 7 | LDL | RA | | |
| 1115 | 4507 | 888 | | ·85 | 4459 | 4686 | | MUL# | 00000 | | 0A005 |
| 1116 | 4686 | 356 | 0 | 60 | 83FB | 4140 | | STA | TEMP | | |
| 1117 | 4140 | 988 | 0 | 26 | 4693 | 4693 | | CLA | | | |
| 1118 | 4693 | 888 | 0 | 32 | 0400 | 4650 | | SHR | 0400 | | |
| 1119 | 4650 | 888 | 0 | 25 | 000C | 4104 | | LDA | RX | | |
| 1120 | 4104 | 888 | 0 | 70 | A000 | 4659 | | ADD | RA | | |
| 1121 | 4659 | 888 | 0 | 35 | 4711 | 4463 | | ERS# | OOHHH | | H0000 |
| 1122 | 4463 | 888 | 0 | 20 | 4315 | 000A | | BUF | | | RA |
| 1123 | 4315 | 888 | 0 | 08 | 0000 | 4370 | | LIRI | 0000 | | |
| 1124 | 4370 | 888 | 0 | 26 | 4173 | 4173 | | CLA | | | |
| 1125 | 4173 | 888 | 0 | 75 | BJFB | 4328 | | SUB | TEMP | | |
| 1126 | 4328 | 688 | 0 | 37 | 0300 | 4334 | | SHL | 0300 | | |
| 1127 | 4334 | 888 | 0 | 35 | 4136 | 4338 | | ERS# | 00000 | | 30000 |
| 1128 | 4338 | 888 | 0 | 75 | 4340 | QOOA | | SUB | | | RA |
| 1129 | 4340 | 888 | 0 | 02 | 0000 | 4195 | | LIR | 0000 | | |
| 1130 | 4195 | 888 | 0 | 25 | 83F8 | 4099 | | LDA | TEMP | | |
| 1131 | 4099 | 888 | 0 | 37 | 0600 | 4108 | | SHL | 0600 | | |
| 1132 | 4108 | 888 | | | 4360 | 4162 | | | 000H0 | | 00000 |
| 1133 | 4162 | 888 | 0 | 20 | 4314 | 4316 | | BUF | 1F | _ | |
| 1134 | | | _ | | | | | HHH | | C | |
| 1135 | 4316 | 888 | | | 4316 | 3965 | _ | ATL | | | OF |
| 1136 | 3965 | 888 | | | 8403 | 3403 | 0 | - | 80000 | | |
| 1137 | 8403 | 888 | | 25 | 9409 | 8966 | B0000 | | 80006 | | 2F |
| 1138 | 3406 | 888 | 1 | | 8413 | 8966 | 50003 | | 80010 | | 2F |
| 1139 | 8404 | 888 | | 00 | 0000 | 0000 | 80001 | CON | 00000 | | 00000 |
| 1140 | 8407 | 888 | | HH | HHHH | НННН | 90004 | CON | ННННН | | ННННН |
| 1141 | 8966 | 858 | | 05 | 8404 | 0008 | 2 | LDX4 | | | RL |
| 1142 | 4314 | 888 | | 32 | 0000 | 8967 | 1 | SHR | 0000 | | 7F |
| 1143 | 8967 | 888 | | 60 | B2FC | 8968 | 7 | STA | MASK | | |
| 1144 | 3968 | 988 | 2 | 30 | 8405 | a969 | | LDL4 | 80002 | | -82 |
| | | | | | | | | | | | |

| | | | | | • | | | | |
|------|------|----------------------|------|---------|----------------|------|-----------|----------------|--------------------|
| 1145 | 8969 | 888 0 29 | 8418 | 0008 | -B2 | LDA1 | 00001 | RL | |
| 1146 | 8405 | 888 0 20 | B2FC | 8971 | 80002 | BUF | MASK | 8F | |
| 1147 | 8408 | 888 0 35 | B2FC | 8971 | 80005 | ERS | MASK | 8F | |
| 1148 | 8409 | 888 Q 50 | 0000 | 0000 | 80006 | CON | 50000 | 00000 | |
| 1149 | 8410 | 888 0 40 | 0000 | 0000 | 80007 | CON | 40000 | 00000 | |
| 1150 | 8411 | 858 0 20 | 0000 | 0000 | 80008 | CON | 20000 | 00000 | |
| 1151 | 8412 | 888 0 10 | 0000 | 0000 | 80009 | CON | 10000 | 00000 | |
| 1152 | 8413 | 888 0 CH | НННН | НННН | 90010 | CON | CHHHH | ННННН | |
| 1153 | 8414 | 888 0 8H | НННН | HHHH | 90011 | CON | 8HHHH | | |
| 1154 | 8415 | 888 0 FH | | | | | | HHHHH | |
| 1155 | 8416 | 898 0 GH | HHHH | HHHH | 50012 | CON | FHHHH | HHHHH | |
| 1156 | 8971 | | HHHH | HHHH | 80013 | CON | GHHHH | ннннн | |
| | | 98B 0 64 | 6418 | 8972 | 8 | STAI | | | |
| 1157 | 8972 | 88B 0 25 | 85FB | 8973 | | LDA | TEMP2 | | |
| 1158 | 3973 | 698 0 75 | 84F8 | 8974 | | SUB | TEMPL | | |
| 1159 | 8974 | 888 0 70 | 8975 | 8976 | | ADD | | -81 | |
| 1160 | 8975 | 858 0 99 | 9999 | 9999 | | CON | 99999 | 9 999 9 | |
| 1161 | 8977 | 888 0 60 | 85F8 | 4450 | 481 | STA | TEMP2 | BVAR | |
| 1162 | 4496 | 888 0 0G | 0000 | 8978 | BVAR1 | IIRI | 0000 | | |
| 1163 | 3978 | 888 0 70 | 8979 | 8969 | | ADD | | -82 | |
| 1164 | 8979 | 858 0 99 | 9800 | 0000 | | CON | 99980 | 00000 | |
| 1165 | 8970 | 89B 0 20 | 8980 | GOOA | &B2 | SUF | | RA | |
| 1166 | 8980 | 888 0 08 | 0000 | 8981 | | LIRI | 0000 | | |
| 1167 | 8981 | 888 0 25 | BZFC | 5982 | | LDA | MASK | | |
| 1168 | 8982 | 888 0 30 | 0000 | 8983 | | LDL | RX | | |
| 1169 | 8983 | 898 0 32 | 0100 | 3984 | | SHR | 0100 | | |
| 1170 | 8984 | 888 0 82 | 8985 | 8967 | | TEO | 44 | 7B | |
| 1171 | 8985 | 888 1 07 | 0001 | 8986 | | IIR2 | 0001 | •. • | |
| 1172 | 3986 | 888 0 30 | 8967 | 3965 | | LDL | 78 | 08 | |
| 1173 | | | ••• | | | ннн | Н | ••• | |
| 1174 | 84AG | 888 0 05 | 4718 | 4179 | EQU | LDX | 2F | FPZER | |
| 1175 | 4718 | 888 0 60 | BOFC | 8976 | 2 | STA | HLOC | -B1 | |
| 1176 | 4134 | 898 0 30 | BJAG | 8736 | PERR | LDL | PSUDX | ERR1* | |
| 1177 | BZAG | 898 0 25 | BJFC | 4570 | COR | LDA | CORE | MINIT. | C4. RESERVE CORE |
| 1178 | 4570 | 888 0 70 | 4772 | 4775 | 50.1 | ADD# | 00000 | 10000 | Ode WESCHAR COME |
| 1179 | 4775 | 35B 0 06 | 4528 | 4528 | | CLX | 00000 | 2000 | |
| 1180 | 4528 | 888 Q 32 | 0400 | 4785 | | SHR | 0400 | | |
| 1181 | 4785 | 998 0 20 | 4687 | 4589 | | | 00000 | 08000 | |
| 1182 | 4589 | | | | | | | OBOOO | |
| 1183 | 4143 | 838 0 60 888 0 05 | BOFC | 4143 | | STA | MLOC | Chara | |
| 1184 | 4395 | 888 0 37 | 4395 | 4179 | 2 | LDX | 2F | FP2ER | |
| 1185 | 4502 | 388 0 70 | 0400 | 4502 | 2 | SHL | 0400 | | |
| 1186 | 4707 | | BJFC | 4707 | | ADD | CORE | | |
| 1187 | | 888 0 05 | AOOO | 4161 | | LDX | RA | · M · S | • |
| 1188 | 4161 | 88B 0 70 | 4663 | 4516 | | ADD | ***** | -83 | |
| | 4663 | 888 0 99 | 9000 | 0000 | | CON | 99900 | 00000 | |
| 1189 | 4517 | 888 0 25 | 4169 | 4321 | &B3 | LDA# | 00000 | 00006 | |
| 1190 | 4321 | 888 0 05 | 4134 | 8760 | · = | LOX | PERR | ERR2+ | |
| 1191 | 4516 | BBB 0 65 | BJFC | 8976 | - 83 | STX | CORE | -81 | |
| 1192 | 8976 | 88B 1 08 | 0000 | 4373 | -81 | LIR3 | 0000 | | C5. DEFINE ADDRESS |
| 1193 | 4373 | 88B 0 05 | 4134 | 4336 | | LOX | PERR | | |
| 1194 | 4336 | 898 0 30 | 4538 | 9810 | | LDL | | FIND* | |
| | | | | | | | | | |

| IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT. THE RECIPIENT AGREES NOT TO IN REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED. IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION, UPON DEMAND |
|---|

| 1195 | 4538 | 888 | 1 | 00 | 8688 | 8688 | | JMP2 | x0000 | | |
|------|------|-----|---|----|------|------|-------------|-----------|--------|---------------|-------------------|
| 1196 | 8688 | 888 | 0 | 25 | BOFC | 4097 | X0000 | LDA | HLOC | 1F | |
| 1197 | 8689 | 888 | a | 25 | BEFC | 4097 | X0001 | LDA | MLOC | 1F | |
| 1198 | 8690 | 888 | | | BJAG | BACB | X0002 | JMP | PSUDX | 1 P | |
| 1199 | | | - | | | | | J. 12 | 7 300 | | |
| 1200 | 8691 | 888 | 0 | 25 | BEFC | 4097 | E000X | LDA | MLOC | 1 F | |
| 1501 | 8692 | 888 | 0 | 25 | 86FC | 4097 | X0004 | LDA | MLOC | iF | |
| 1202 | 8693 | 888 | | | 4134 | 4134 | X0005 | JMP | PERR | 4. | |
| 1203 | 4097 | 888 | Q | 30 | BJAG | 8861 | 1 | LDL | PSUDX | DEFN* | |
| 1204 | | | | | | | • | ННН | F 300m | Sect 144 | |
| 1205 | 4239 | 888 | ٥ | 05 | 4056 | 0458 | ONN | LDX | ONSW | 1F | |
| 1206 | BSAH | 888 | | 05 | 0470 | 0458 | OFF | LDX | OFFSW | iF | C6. ON OFF |
| 1207 | 0458 | 855 | | 65 | B9FH | 0462 | 1 | STX | OPTIM | . 4 .F | CO. ON OFF |
| 1208 | 0462 | 355 | | | 0464 | 4179 | • | LDX | OFTAN | FP2ER | |
| 1209 | 0464 | 888 | | | 0466 | 0468 | | LDL | TYPE | PPECK | |
| 1210 | 0468 | 888 | | | 0471 | BAEB | | TEQ | i tra | PSUDX | |
| 1211 | 0471 | 888 | | | BOFH | 0475 | | LDL | OPTIH | room | |
| 1212 | 0475 | | | | 4439 | BAG | | STL | SWICH | PSUDX | |
| 1213 | BOAH | 888 | ٥ | 67 | 0008 | 0568 | TYP | HLT | RL | 1.0007 | |
| 1214 | 0568 | 888 | | | 0466 | 0668 | • • • | STL | TYPE | | |
| 1215 | 0668 | 888 | | | 0241 | BJAG | | STL | 0241 | PSUDX | |
| 1519 | 0470 | 888 | Q | 31 | 0473 | 0473 | OFFSW | CLL | 0474 | | |
| 1217 | 0473 | 888 | 0 | 25 | 87FH | 0477 | | LDA | FTAG | | C7. ASSEMBLER OFF |
| 1218 | 0477 | 888 | | | 0480 | 4189 | | TEQ | | -PR1 | C/ ASSEMBLER OFF |
| 1219 | 0480 | 888 | | | 0482 | 0484 | | LDA | 15 | | |
| 1220 | 0484 | 888 | | | 0486 | 0488 | | | 25 | | |
| 1221 | 0488 | | | 60 | 0365 | 0567 | | STA | 0365 | | |
| 1222 | 0567 | 888 | | | 0370 | 0572 | | STX | 0370 | | |
| 1223 | 0572 | 888 | Ō | 06 | 0575 | 0575 | | CLX | 03.0 | | |
| 1224 | 0575 | | | 63 | 0575 | 0578 | | ZAP | | | |
| 1225 | 0578 | | | 60 | 0250 | 0452 | | STA | 0250 | | |
| 1226 | 0452 | | | 65 | 0255 | 0457 | | STX | 0255 | | |
| 1227 | 0457 | | | 60 | 0281 | 0483 | | STA | 0281 | | |
| 1228 | 0483 | 888 | | | 0286 | 4112 | | STX | 0286 | FIN | |
| 1229 | 0482 | 888 | | 88 | 8866 | 6888 | 1 | | *** 0 | FF ** | |
| 1230 | 0486 | 858 | | | 2021 | 1022 | ž | | *** 0 | FF ** | |
| 1231 | | | | | | | | ННН | Н | er aran | |
| | | | | | | | | , 1, 9, • | * * | | |

1279

1280

888 0 82 4577 4777 886 0 30 4112 4505

| 1232 | 4332 | 888 0 77 | 4332 | 4536 | CMPL* | ATL | | | X. | EXAMINE REMARKS FIELD |
|------|-------|----------|------|------|----------|-------|-------|-----------------|-----|--|
| 1233 | 4536 | 88B 0 25 | BEAC | 4540 | | | MUMI | | | CMPL* PUTS INSTRUCTION IN RA INTO MUM CODE |
| 1234 | 4540 | 888 0 60 | 67AC | 4344 | | | MUML | 1F | | MUML IS THE LOCATION OF LAST MUM INSTR. |
| 1235 | 4736 | 888 0 25 | BOAC | 4344 | COMP* | | MUMI | 1F | | |
| 1236 | 4344 | 888 0 70 | 4696 | | COMPT | | | | | COMP* PUTS WORD IN RL INTO MUM CODE |
| 1237 | | - | - | 4299 | 1 | ADD# | | 20000 | | BUT IT ISNT REALLY AN INSTRUCTION |
| | 4299 | 856 0 60 | BOAC | 4353 | _ | | MUMI | 2F | | EXIT IS IN RX. IN BOTH CASES. |
| 1238 | 4353 | 88B 0 70 | 4305 | 000A | 2 | ADD | | RA | | |
| 1239 | 4305 | 888 0 50 | 5199 | 000C | | | ¥9999 | RX | | |
| 1240 | 4740 | 688 0 50 | 4342 | 4544 | COMT* | STL | -com | | | |
| 1241 | 4544 | 888 0 25 | BBAC | 4548 | | LDA | COMI | | | |
| 1242 | 4548 | 88B 0 60 | BZAB | 4702 | | | R94 | | | |
| 1243 | 4702 | 888 0 25 | 4304 | 4156 | | LDA | | 8F | | |
| 1244 | 4304 | 888 0 00 | 8678 | 3669 | | | R0009 | R0000 | | |
| 1245 | 4156 | 998 2 88 | 3400 | 4573 | 8 | | | MOGOG | | MOVE ALL REMARKS TO THE COMMENTS TAPE |
| 1246 | 4573 | 888 2 07 | 0010 | | • | | COMTS | | | |
| 1247 | | | | 4377 | | IIR4 | 0010 | | | FOR USE BY PASS 3. |
| | 4377 | 898 0 60 | BBAC | 4331 | | | COMI | | | |
| 1248 | 4331 | 858 0 70 | 4583 | 4342 | | ADD | | -COM | | |
| 1249 | 4583 | 888 0 99 | 9800 | 0000 | _ | | 99980 | 00000 | | |
| 1250 | 4343 | 88B 0 60 | BBAC | 4297 | &COM | STA | COMI | | | |
| 1251 | 4297 | 888 0 05 | 4699 | 4301 | | LDX | 2F | | | |
| 1252 | 4301 | 888 0 30 | 4553 | 8919 | | LDL | | TSUB* | | |
| 1253 | 4553 | 888 0 C6 | 3400 | 4699 | | | COMTS | 2F | | |
| 1254 | 4699 | 898 0 H2 | 0700 | 4342 | 2 | | OTAPS | -COM | | |
| 1255 | 4505 | 888 0 25 | 8669 | 4109 | BDK | | R0000 | | | BOK: BLANK OUT COLS 32-35 AND GO TO RL. |
| 1256 | 4109 | 888 0 35 | 4361 | 4313 | S. D. C. | | 00000 | u Lieu Lieu | | SOME BEXAM OUT COLD SEEDS AND GO TO ME! |
| 1257 | | | | | | | | HHHHH | | |
| 1258 | 4313 | 888 0 60 | 8669 | 4667 | | | R0000 | | | |
| | 4667 | 888 0 25 | 8670 | 4521 | | | R0001 | 4 14 45 46 41 1 | | |
| 1259 | 4521 | 88B 0 35 | 4773 | 4326 | | | 00000 | HHHHH | | |
| 1260 | 4326 | 888 0 20 | 4728 | 4580 | | SUF# | | 00000 | | |
| 1261 | 4580 | 888 0 60 | 8670 | 9008 | | | R0001 | RL | | |
| 1262 | 4312 | 888 1 08 | 0007 | 4515 | FLOW | LIRS | 0007 | | X1. | WHAT OK FIELD |
| 1263 | 4515 | 888 0 25 | 8670 | 4519 | | LDA I | R0001 | | | |
| 1264 | 4519 | 888 0 06 | 4124 | 4124 | | CLX | | | | |
| 1265 | 4124 | 888 0 65 | BBFH | 4178 | | | RTAG | | | |
| 1266 | 4178 | 888 0 32 | 0500 | 4186 | | SHR | 0500 | | | |
| 1267 | 4186 | 888 0 77 | 4186 | 4789 | | ATL | | | | |
| 1268 | 4789 | 898 0 25 | B669 | 4543 | | | R0000 | | | |
| 1269 | 4543 | 888 O 35 | 4595 | 4497 | | | | 00000 | | |
| 1270 | 4497 | 888 0 20 | | | | ERSA | | 00000 | | |
| | | | 0008 | 4501 | | | RL | | | |
| 1271 | 4501 | 88B 0 60 | BOAB | 4705 | | | DK | | | |
| 1272 | 4705 | 888 0 30 | 4157 | 4309 | | LDL# | | 88888 | | |
| 1273 | 4309 | 888 0 82 | 4362 | 4562 | | TEQ : | 55 | | | |
| 1274 | 4562 | 888 0 30 | 4514 | 4716 | | LDL# | 03000 | 87888 | | |
| 1275 | 4716 | 698 0 82 | 4719 | 4369 | | TEQ | | 1F | | |
| 1276 | 4719 | 888 0 60 | BBFH | 4324 | | | RTAG | - · | | |
| 1277 | 4324 | 888 0 30 | 4362 | 4505 | | LDL. | | 8DK | | • |
| 1278 | 4369 | 888 0 30 | 4721 | 4524 | 1 | LDL# | | 87888 | | |
| 1279 | 11600 | 200 0 00 | 445 | 4357 | - | | ~1444 | 2 1 D D D | | |

TEQ

LDL FIN

1F

BDK

| IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO | REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED. | IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE | WRITTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER | SAME TO SPERRY RAND CORPORATION, UPON DEMAND |
|---|--|---|--|--|
| N N | REPRODUCE, COP | IN WHOLE OR IN | WRITTEN PERMIS | SAME TO SPER |

| 1281 | 4777 | 388 | | | | 1 | | 01211 | 83649 | |
|--------------|----------------------|------------|------------|--------|------------|-------------|--------------------|------------|----------------|----------------|
| 1282 | 4531 | | 0 8 | | | | | 5 6 | | |
| 1283 | 4734 | | Q 3 | | | | | 03112 | 83123 | |
| 1284 | 4738 | | 0 8 | | | | TEC | | 1F | |
| 1285 | 4141 | 888 | | | | | LDX | 56 | COMP* | |
| 1286 | 4341 | 858 | | | | 1 | | HOHMH | HOHHH | |
| 1287 | 4795 | 888 | 0 3 | | | | LDL# | 00100 | BOABB | |
| 1288 | 4149 | | 0 8 | | | | TEQ | S4 | | |
| 1289 | 4352 | 888 | | | | | | HHHHH | HHOHH | |
| 1290 | 4356 | 856 | | | | | | 00010 | 800AB | |
| 1291 | 4560 | 888 | | | | | TEQ | 1F | | |
| 1292 | 4713 | 898 | | | | | | нннн | HHHOH | |
| 1293 | 4117 | 888 | | | | | | 00001 | AOOOA | |
| 1294 | 4171 | 888 | | _ | | | TEQ | | \$3 | |
| 1295 | 4174 | 888 | | | | | LDA | DK | | |
| 1296 | 4378 | 898 | | | | | ERS# | 00000 | OOHHO | |
| 1297 | 4532 | 888 | | | - | | SHL | 0300 | 2F | |
| 1298 | 4513 | 888 | | | | 1 | LDA | DK | | |
| 1299 | 4317 | 888 | | | - | | ERS# | 00000 | 00H00 | |
| 1300 | 4371 | 858 | | _ | | | SHL | 0200 | 2F | |
| 1301 | 4188 | 886 | - | | | 2 | ADD | RA | | |
| 1302 | 4193 | 888 | | | - | | LDL | N | | |
| 1303 | 4748 | 888 | | | | | TGR | S2 | | |
| 1304 | 4151 | 888 | _ | _ | | | LDL | 55 | ERR1* | |
| 1305 | 4362 | | 0 0 | | | \$ 5 | LIR1 | 0000 | -NO# | X2. SCAN FOR # |
| 1306 | 4367 | | 0 2 | | | -NO# | | R0001 | | |
| 1307 | 4574 | | 0 3 | | | | ERS# | 88888 | 88888 | |
| 1308 | 4578 | 888 | | | | | SUB | RA | | |
| 1309 | 4783 | 888 | | | | | ATL | | | |
| 1310 | 4586 | | 0 2 | | | | LDA1 | R0001 | | |
| 1311 | 4541 | | 0 3 | - | - | | ERSA | 66666 | 6 666 6 | |
| 1312 | 4346 | 888 | | | - | | MTX | | | |
| 1313 | 4349 | 888 | | | | | | 33333 | 33333 | |
| 1314 | 4704 | 358 | | | | | ERS | RL | | |
| 1315 | 4508 | 855 | | - | - | | ATL | | | |
| 1316 | 4561 | 888 | | | - | | | R0000 | | |
| 1317 | 4166 | 388 | | | 8 4571 | | ADD# | 33333 | 33333 | |
| 1318 | 4571 | 888 | | | | | ERS | RL | | |
| 1319 | 4726 | 888 | | | | | CLL | | | |
| 1320 | 4579 | 355 | | | | | TEQ | | if | |
| 1321 | 4732 | 388 | | | | | IIR1 | 0002 | | |
| 1322 | 4786 | 888 | | - | | | ADD | | -NO# | |
| 1323 | 4388 | 888 | | | | | CON | 99999 | 00000 | |
| 1324 | 4368 | 888 | | | | &NO# | JMP | S6 | | |
| 1325 | 4182 | 888 | | | - | 1 | LDL# | 11111 | 11111 | |
| 1326 | 4137 | 888 | | | | | SUF | RL | | |
| 1327 | 4741 | 888 | | | | | MUL | RA | | |
| 1328 | | 770 ATT | /% T | E 1199 | 14 × 4 *** | | | | | |
| | 4770 | 888 | | | | | ERS# | 00000 | 0000H | |
| 1329 1330 | 4176 4176 4337 | 868 888 | 0 3 | 7 060 | 0 4337 | | ERS# SHL ATL | 0600 | 000014 | |

| 1331 4390 888 0 70 4542 4546 ADD 1F 1332 4546 888 0 60 BOAC 4100 STA SHR1 | |
|--|--------------------|
| במוב בים האות הנהם הג מסם בתפונ כבדו | |
| 1332 4546 888 0 60 BOAC 4100 STA SHR1 | |
| 1333 4100 888 0 25 4552 4154 LDA# 00090 | 00000 |
| 1334 4154 888 0 75 0008 4509 SUB RL | |
| 1335 4509 BBB 0 70 4542 4746 ADD 1F | |
| 1336 4746 888 0 60 81AC 4300 STA SHR2 | 2F |
| 1337 4542 888 0 32 0000 0008 1 SHR 0000 | RL |
| 1338 4300 888 0 29 8670 4155 2 LDA1 ROOO1 | 116 |
| 1339 4155 888 0 09 8672 4760 LDX1 R0003 | |
| 1340 4760 888 0 30 4762 BOAC LDL | SHR 1 |
| 1341 4762 888 0 35 4366 4768 ERS# HHHHH | ВНННЯ |
| 1342 4768 888 0 65 83F8 4376 STX TEMP | 11.41.4 |
| 1343 4376 888 0 30 4778 81AC LDL | SHR2 |
| 1344 4778 888 0 32 0100 4384 SHR 0100 | JIH1E |
| 1345 4384 888 0 69 8670 4590 STX1 R0001 | |
| 1346 4590 BBB 0 29 B669 4196 LDA1 R0000 | |
| | |
| | ei in i |
| 1348 4551 888 0 30 4753 80AC LDL | SHRI |
| 1349 4753 888 0 35 4357 4709 ERS# HHHHH | ННННО |
| 1350 4709 BBB 0 30 4761 BIAC LDL | SHR2 |
| 1351 4761 89B 0 32 0100 4717 SHR 0100 | |
| 1352 4717 888 0 69 8669 4576 STX1 R0000 | 815 4 |
| 1353 4576 888 0 30 4779 80AC LDL | SHR 1 |
| 1354 4779 888 0 35 4584 4537 ERS# HHHHH | 00000 |
| 1355 4537 BBB 0 77 4537 4790 ATL | |
| 1356 4790 888 0 25 B3F8 4744 LDA TEMP | |
| 1357 4744 888 0 06 4147 4147 CLX | |
| 1358 4147 888 0 32 0500 4355 SHR 0500 | |
| 1359 4355 BBB 0 20 000B 4159 BUF RL | |
| 1360 4159 888 0 60 83F8 4163 STA TEMP | |
| 1361 4163 888 0 25 87AC 4167 LDA MUML | |
| 1362 4167 888 0 60 8288 4771 STA RB4 | |
| 1363 4771 888 2 25 5201 4354 LDA4 #0001 | |
| 1364 4354 888 0 70 4556 4363 ADD | -# |
| 1365 4556 BBB 0 98 0000 0000 CON 98000 | 00000 |
| 1366 4363 888 0 25 4566 4776 -# LDA# 09000 | 00000 |
| 1367 4776 898 0 05 4364 4332 LDX 4# | CMPL* |
| 1368 4364 888 0 30 83F8 4731 8# LDL TEMP | |
| 1369 4731 888 0 05 4784 4737 LDX | 1F |
| 1370 4784 888 0 88 8880 0000 CON 88888 | 00000 |
| 1371 4737 888 0 25 4191 4593 1 LDA | 8F |
| 1372 4191 888 1 00 0000 0000 CON1 00000 | 00000 |
| 1373 4593 888 0 70 0008 4198 8 ADD RL | 000,0 |
| 1374 4198 888 0 82 4751 4752 TEG 2F | |
| 1375 4752 BBB 0 25 0008 4756 LDA RL | |
| 1376 4756 88B 0 32 0100 4563 SHR 0100 | |
| 1377 4563 888 0 35 4165 4567 grs# OHHHH | о нн нн |
| 1378 4567 888 0 77 4567 4737 ATL | 18 |
| 1379 4751 BBB 0 25 000C 4555 2 LDA RX | |
| 1380 4555 888 0 35 4557 4359 grs# 00000 | ннинн |
| TOUDO WENT TELL THE DOOR OF DOOR COUNTY | HUMUN |

| 1381 | 4359 | 58B 0 | 20 | 0008 | 4763 | | BUF | AL | | | | |
|--------|---------|-------|----|--------------|------|----|------|--------------|----------------|-----|------------|-------------|
| 1382 | 4763 | 888 0 | 77 | 4763 | 4766 | | ATL | ~ | 2F | | | |
| 1383 | 4766 | 358 J | | 8 3F8 | 4181 | 2 | | TEMP | ■. | | | |
| 1384 | | | | | | - | LDA | | | | | |
| | 4181 | 898 0 | | BJFB | 4187 | | STL | TEMP | | | | |
| 1385 | 4187 | 888 | | 4391 | 4793 | | ERS# | H0000 | H 000 0 | | | |
| 1386 | 4793 | 898 0 | 30 | 89AC | 4347 | | LDL | KEY | | | | |
| 1387 | 4347 | 888 0 | 82 | 4500 | 4700 | | TEQ | | 2F | | | |
| 1388 | 4500 | 888 | | 83F8 | 4554 | | LDA | TEMP | _ | | | |
| 1389 | 4554 | 888 0 | | 4757 | 4559 | | | НННОН | HHHOO | | | |
| 1390 | | | | | | | | | | | | |
| | 4559 | 888 | | 4714 | 4767 | | | 00000 | 88800 | | | |
| 1391 | 4767 | 888 0 | | 4381 | 4581 | | TEQ | | 3F | | | |
| 1392 | 4381 | 888 0 | | 4387 | 4591 | | LDA | | 4F | | | |
| 1393 | 4387 | 388 0 | 00 | 0000 | 000H | | CON | 00000 | 0000H | | | |
| 1394 | 4581 | 888 | 25 | 83F8 | 4587 | 3 | LDA | TEMP | | | | |
| 1395 | 4587 | 888 0 | 35 | 4791 | 4194 | | | ННОНН | HHOOO | | | |
| 1396 | 4194 | 888 | | 4396 | 4398 | | | 00000 | 88000 | | | |
| - 1397 | 4398 | 888 | | 4754 | 4700 | | TEQ | 00000 | 2F | | | |
| 1398 | 4754 | 858 0 | | 4708 | | | | | 4F | | | |
| | | | | | 4591 | | LDA | 00000 | | | | |
| 1399 | 4708 | 888 | | 0000 | OOHH | | CON | 00000 | 000HH | | | |
| 1400 | 4591 | 888 0 | | BJFB | 4596 | 4 | ERS | TEMP | | | | |
| 1401 | 4596 | 888 0 | | 0400 | 4755 | | SHL | 0400 | | | | |
| 1402 | 4755 | 888 0 | 70 | GOOA | 4164 | | ADD | RA | | | | |
| 1403 | 4164 | 888 0 | 60 | BZAB | 4781 | | STA | R84 | | | | |
| 1404 | 4781 | 898 0 | 77 | 4781 | 4787 | | ATL | | | | | |
| 1405 | 4787 | | 25 | 4742 | 4394 | | LDA | SERAL | | | | |
| 1406 | 4394 | 888 0 | | 4796 | 4549 | | | 00000 | 00001 | | | |
| 1407 | 4549 | 888 | | 4742 | 4594 | | STA | SERAL | 4 04,00 | | | |
| 1408 | 4594 | 888 | | 0008 | 4749 | | ADD | RL | | | | |
| 1409 | 4749 | | 05 | BTAC | | | | | | | | |
| 1410 | 4158 | | | | 4158 | | LDX | MUML | | | | |
| | | 888 0 | | BAKB | 4564 | | STX | RB5 | | | | |
| 1411 | 4564 | 888 3 | | 5201 | 4358 | | | M0001 | | | | |
| 1412 | 4358 | 858 3 | | 5201 | 4558 | | | M0001 | | | | |
| 1413 | 4558 | 888 0 | | 4146 | 4598 | | LDA | N | | | | |
| 1414 | 4598 | 656 0 | 70 | 4742 | 4547 | | ADD | SERAL | | | | |
| 1415 | 4547 | 888 2 | 60 | 5001 | 4534 | | STA4 | STOPT | \$6 | | | |
| 1416 | 4700 | 888 0 | 30 | 83F8 | 4758 | 2 | LDL | TEMP | | | | |
| 1417 | 4758 | 898 0 | | 4534 | 4736 | ~ | LDX | 56 | COMP* | | | |
| 1418 | 4534 | 888 | | 4588 | 4192 | 56 | | 88888 | 88888 | ¥3. | TRANSFER | DFUADEC |
| 1419 | 4192 | 888 0 | | 8670 | 4747 | 30 | | | 80000 | 771 | LIMITALINA | Umbiwisis 9 |
| 1420 | 4747 | | | | | | | R0001 | . = | | | |
| 1421 | | | 82 | 4150 | 4350 | | TEQ | ~~~~ | 1F | | | |
| | 4150 | 888 0 | | 8672 | 4759 | | | R0003 | | | | |
| 1422 | 4759 | | 82 | 4764 | 4350 | | TEO | | 1F | | | |
| 1423 | 4764 | | 25 | 8674 | 4382 | | LDA | R0005 | | | | |
| 1424 | 4382 | | 82 | 4788 | 4350 | | TER | | 1F | | | |
| 1425 | 4788 | | 25 | B676 | 4392 | | LDA | R0007 | | | | |
| 1426 | 4392 | 888 0 | 82 | 4197 | 4350 | | TEO | | 1F | | | |
| 1427 | 4197 | 888 0 | 25 | 8678 | 4365 | | LDA | R0009 | - | | | |
| 1428 | 4365 | | 82 | 4582 | 4350 | | TEO | 2F | 1F | | | |
| 1429 | 4350 | | 30 | 4765 | 4740 | 1 | LDL | - (*) | COMT* | | | |
| 1430 | 4765 | 888 0 | | 4782 | 4592 | • | LDA | | 8F | | | |
| | * · U J | | | 7,02 | マルアム | | アウン | | QF. | | | |

| 1431 | 4782 | 888 0 00 | 8678 | 9449 | | IMB | 22002 | 80000 | |
|--------|------|----------|------|------|-----------|------|--------------|----------------|-----------------------|
| | | | | 8669 | • | JMP | R0009 | R0000 | |
| 1432 | 4592 | 888 0 80 | | 4582 | 8 | TDC | Z0000 | 2F | |
| 1433 | 4582 | 88B 0 25 | | 4792 | 2 | LDA | RTAG | | |
| 1434 | 4792 | 888 0 31 | | 4397 | | CLL | | | |
| 1435 | 4397 | 888 0 88 | 4112 | 4189 | | TEO | FIN | -PRI | |
| 1436 | 0989 | 888 0 00 | 0000 | 0000 | Z0000 | CON | 00000 | 00000 | |
| 1437 | 0991 | 888 0 00 | | 0000 | Z0002 | CON | 00000 | 00000 | |
| 1438 | 0993 | 898 0 00 | | 0000 | 20004 | CON | 00000 | 00000 | |
| 1439 | 0995 | 888 0 00 | | 0000 | Z0006 | CON | 00000 | 00000 | |
| 1440 | 0997 | 888 0 00 | | 0000 | 20008 | CON | 00000 | 00000 | |
| 1441 | 0990 | 388 0 88 | | 8888 | Z0001 | CON | 88888 | 88888 | |
| 1442 | 0992 | 888 0 88 | | 8888 | Z0003 | CON | 88888 | 88888 | |
| 1443 | 0994 | | | | | | | | |
| 1444 | | 858 0 88 | | 8888 | Z0005 | CON | 88888 | 8 8 888 | |
| | 0996 | 888 0 88 | | 8888 | Z0007 | CON | 88888 | 88888 | |
| 1445 | 0998 | 888 0 88 | 8888 | 9888 | 20009 | CON | 88888 | 88888 | |
| 1446 | | | | | | HHH | | | |
| 1447 | 4701 | 888 0 60 | | 0548 | 52 | STA | N | | X4. COMPILE O1 OP |
| 1448 | 0548 | 888 0 70 | 0550 | 0553 | | ADD# | 01000 | 00000 | |
| 1449 | 0553 | 888 0 05 | 0555 | 4332 | | LDX | | CMPL* | |
| 1450 | 0555 | 888 0 30 | BIFG | 0559 | | LDL | LINE | | |
| 1451 | 0559 | 888 0 05 | | 4736 | | LDX | | COMP* | |
| 1452 | 0561 | 888 0 30 | | 4740 | | LDL | | COMT# | |
| 1453 | 0563 | 888 0 25 | | 0767 | | LDA | MUMI | | |
| 1454 | 0767 | 888 0 60 | | 0571 | | STA | R84 | | |
| 1455 | 0571 | 888 2 07 | | | | IIR4 | | | |
| 1456 | 0775 | | | 0775 | | | 0006 | | |
| | | 888 0 60 | | 0579 | | STA | MUMI | 'A# | |
| 1457 | 0579 | 858 0 25 | | 0583 | | LDA | | 8F | |
| 1458 | 0581 | 888 0 00 | | 8669 | _ | JMP | R0001 | R0000 | |
| 1459 | 0583 | 888 2 86 | | 0599 | 8 | | #9994 | | |
| 1460 | 0599 | 88B 0 70 | | 0404 | | | 00000 | 20002 | |
| 1461 | 0404 | 858 2 88 | | 0420 | | | W9996 | | |
| 1462 | 0420 | 898 0 70 | | 0425 | | | 00000 | 20002 | |
| 1463 | 0425 | 888 2 88 | | 4112 | | TCD4 | #9998 | FIN | |
| 1464 | 4374 | 888 0 30 | 0576 | 4505 | 53 | LDL | | BOK | X5. COMPILE CONDITION |
| 1465 | 0576 | 888 Q 25 | B670 | 0580 | | LDA | R0001 | | |
| 1466 | 0580 | 888 0 35 | 0582 | 0584 | | ERS# | 00000 | HHHHH | |
| 1467 | 0584 | 898 0 30 | 0586 | 0588 | | LDL# | 00000 | 88888 | |
| 1468 | 0588 | 888 0 82 | | 0791 | | TEO | 1F | | |
| 1469 | 0791 | 888 0 25 | | 0595 | | LDA | NUML | | |
| 1470 | 0595 | 888 0 60 | | 0799 | | STA | R84 | | |
| - 1471 | 0799 | 888 2 25 | | 0403 | | | M0001 | | |
| 1472 | 0403 | 888 0 70 | | 0408 | | | 01000 | 00000 | |
| 1473 | 0408 | 888 2 60 | | 0603 | | | W0001 | •••• | |
| 1474 | 0603 | BBB 0 70 | | 0608 | | | #0001 | -E. A | |
| 1475 | 0605 | 888 0 97 | | | | ADD | DOOF | -FL0 | |
| 1476 | | | | 0000 | witten 18 | CON | 97000 | 00000 | |
| 1477 | 0608 | 888 0 25 | | 0412 | -FLO | LDA | 44000 | 2F | |
| | 0410 | 888 0 06 | | 0000 | | CON | 06000 | 00000 | · |
| - 1478 | 0609 | BBB 0 25 | | 0412 | &FLO | LDA | | 2F | |
| 1479 | 0411 | 888 0 05 | | 0000 | | CON | 05000 | 00000 | |
| 1480 | 0591 | 888 0 2 | 0593 | 0412 | 1 | LDA | | 2 F | |
| | | | | | | | | | |

| - | | | | | | | | |
|------|------|----------------------|------|--------------|-------------|------------------------|--------|---|
| 1481 | 0593 | 888 0 08 | 0000 | 9000 | | CON 08000 | 00000 | |
| 1482 | | 888 0 05 | 0414 | 4332 | 2 | LDX | CMPL* | |
| 1483 | | 898 0 30 | | 0418 | 54 | | CLAFTA | |
| 1484 | | 888 Q 05 | | 4736 | | LDL DK LDX S5 | COMP* | |
| 1485 | | 888 0 05 | | 0556 | 54 | LDX# 03000 | 00000 | |
| 1486 | | 888 0 30 | | 0560 | 3 4 | LDL 03000 | TERM# | X6. FINISH PREV SECTION |
| 1487 | | 888 0 25 | | 0562 | | LDA DK | 1 ERMT | VOS LIMIDU LUEA DECITAR |
| 1488 | | 888 0 37 | | | | | | |
| 1489 | | 888 0 35 | | 0566 0570 | | SHL 0100 ERS# H0000 | H0000 | |
| 1490 | | 888 0 60 | | 0574 | | STA KEY | HOUGO | |
| 1491 | | 888 0 31 | | 0577 | | | | |
| 1492 | | 888 0 08 | | 0780 | | CLL LIRI 0000 | _C: D | X7. INITIALIZE |
| 1493 | | 888 0 54 | | 0803 | -CLR | STL1 STOPT | -CLR | Y IMIITAMITE |
| 1494 | | 888 0 0G | 0002 | 0407 | -651 | 11R1 0002 | | |
| 1495 | | 888 0 70 | | 0780 | | ADD | -CLR | |
| 1496 | | 898 0 99 | 9800 | 0000 | | CON 99980 | 00000 | |
| 1497 | | 888 0 50 | | 0585 | SCLR | STL HUMI | 00000 | |
| 1498 | | 888 0 50 | BBAC | 0589 | - C | STL COMI | | |
| 1499 | | 888 0 50 | | 0594 | | STL SERAL | | |
| 1500 | | 888 0 50 | 4146 | 0598 | | STL N | | |
| 1501 | | 898 0 30 | 0400 | 0402 | | LDL | PAGE* | |
| 1502 | | 888 0 30 | 4112 | 4740 | | LDL FIN | COMT* | |
| 1503 | | 888 0 50 | 0804 | 0406 | PAGE* | STL -SKIP | ••••• | SKIP TO BEGINNING OF PAGE SUBROUTINE |
| 1504 | | 888 0 25 | 0808 | 0610 | , | LDA# 00000 | 00066 | |
| 1505 | | 888 Q 75 | BZAC | 0415 | | SUB LC | 0000 | |
| 1506 | | 888 0 31 | 0618 | 0618 | | CLL | | |
| 1507 | | 888 0 50 | B2AC | 0622 | | STL LC | | |
| 1508 | 0622 | 888 0 37 | 0400 | 0429 | | SHL 0400 | | |
| 1509 | | 888 0 30 | 0431 | 0433 | | LDL# 00004 | 90000 | |
| 1510 | | 888 0 87 | 0436 | 0636 | | TGR | 15 | |
| 1511 | | 858 0 70 | 0438 | 0441 | | ADD# 00001 | 00000 | |
| 1512 | | BBB 0 20 | 0443 | 0636 | | SUF | 1F | |
| 1513 | | 888 0 00 | 0040 | 0000 | | CON 00004 | 00000 | |
| 1514 | | 88B Q 70 | 0638 | OOOA | 1 | ADD | RA | |
| 1515 | | 888 0 16 | 0000 | 9804 | | PFD 0000 | -SKIP | |
| 1516 | | 888 0 67 | 3333 | OOOA | &SKIP | HLT 3333 | RA | |
| 1517 | | 888 0 50 | Bofb | 0564 | TERM# | STL EXIT | | TERMINATE SECTION SUBROUTINE. |
| 1518 | 0564 | 888 0 31 | 0967 | 0967 | | CLL | | RL IS THE EXIT. RX IS THE 03 OR 04 TO COMPILE |
| 1519 | 0967 | 868 0 25 868 0 82 | B6AC | 0771 | | LDA MUMI | | THIS SUBROUTINE DOES WHAT IS DESCRIBED |
| 1520 | 0771 | 888 0 82 | Bofb | 0774 | | TEQ EXIT | | UNDER SUBSECTION X6. |
| 1521 | | 888 0 30 | | 0778 | | LDL RX | | |
| 1522 | | 888 0 05 | 0980 | 4736 | | LDX | COMP* | |
| 1523 | | 888 0 25 | BBAC | 0784 | | LDA COMI | | |
| 1524 | | 888 0 30 | 0786 | 0788 | | LDL# 99999 | 99999 | |
| 1525 | | 888 0 70 | 0590 | AOOC | | ADD | RA | |
| 1526 | | 88B 0 50 | _ | 3003 | | STL CHTSI | | |
| 1527 | | 998 0 05 | 3005 | 0607 | | LDX 2F | | |
| 1528 | | 888 0 30 | | 8919 | | LDL | TSUB* | |
| 1529 | | 898 0 C6 | 3400 | 3005 | _ | TBL COMTS | 2F | |
| 1530 | 3005 | 888 0 H2 | 0700 | 0822 | 2 | TWR OTAP3 | | |
| | | | | | | | | |
| • | | | | | | • | | |
| | | | | | | | | |
| | | | | | | | | |

| 1531 | 0822 | 888 | 0 08 | 0000 | 0625 | | LIR1 0000 | 4F |
|------|------|-----|------|------|------|---|------------|-------|
| 1532 | 0532 | 888 | O OG | 0200 | 0536 | 1 | IIR1 0200 | |
| 1533 | 0536 | 898 | 0 30 | BOAC | 0540 | | LDL MUMI | |
| 1534 | 0540 | 888 | 0 87 | 0543 | 0625 | | TGR 3F | 4F |
| 1535 | 0625 | 888 | 0 05 | 0427 | 0629 | 4 | LDX 2F | |
| 1536 | 0629 | 888 | 0 30 | 0631 | 8919 | | LDL | TSUB* |
| 1537 | 0631 | 888 | 0 CF | 5000 | 0427 | | TBL1 #9800 | 2F |
| 1538 | 0427 | 888 | 0 H2 | 0600 | 0532 | 2 | TWR OTAP2 | 18 |
| 1539 | 0543 | 888 | 0 25 | 0545 | 0547 | 3 | LDA# 99999 | 99999 |
| 1540 | 0547 | 888 | 0 64 | 5199 | 0601 | | STA1 W9999 | |
| 1541 | 0601 | 888 | 0 05 | 3203 | 3205 | | LDX 2F | |
| 1542 | 3205 | 888 | 0 30 | 0807 | 3919 | | LDL | TSUB* |
| 1543 | 0807 | 886 | O CF | 5000 | 3203 | | TBL1 W9800 | 2F |
| 1544 | 3203 | 388 | 0 H2 | 0600 | 80F8 | 2 | TWR OTAP2 | EXIT |
| | | | | | | | | |

| 1545 | 0745 | 888 0 G2 | 0300 | 0762 | 30P | TRD | ITAP1 | | 8. | BEGINNING OF ASSEMBLY |
|------|------|----------|------|------|----------------|------|---|---|-----|--|
| 1546 | 0762 | 898 0 C7 | 3167 | 0565 | | TAT | | 1F | 81. | CHECK INPUT TAPE |
| 1547 | 3167 | 888 0 67 | 4444 | 0745 | | HLT | 4444 | 80P | | |
| 1548 | 0565 | 888 0 25 | 4223 | 0975 | 1, | LDA | TCON1 | | | |
| 1549 | 0975 | 888 0 60 | BBFG | 0779 | | STA | TCONT | | | |
| 1550 | 0779 | 888 0 25 | 0745 | 0747 | | LDA | BOP | | 82. | READ BLOCK |
| 1551 | 0747 | 888 0 60 | 89FG | 0551 | | | LTAPE | | | |
| 1552 | 0551 | 888 0 05 | 0753 | 0755 | | LDX | 1F | | | |
| 1553 | 0755 | 85B 0 30 | 0000 | 8919 | | | RX | TSUB* | | |
| 1554 | 0753 | 888 0 G2 | 0300 | 0770 | 1 | TRD | ITAPI | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | |
| 1555 | 0770 | 888 0 25 | 4624 | 0776 | - | LDA | TCON2 | | | • |
| 1556 | 0776 | 888 0 60 | BBFG | 3180 | | STA | TCONT | | | |
| 1560 | 3180 | BBB 0 30 | 0782 | 0984 | | LDL | | 1F | | |
| 1561 | 0782 | 888 1 00 | 0000 | 0001 | | | 00000 | 00001 | | |
| 1562 | 0984 | 888 0 50 | BIFG | 0988 | 1 | | LINE | | | |
| 1563 | 0988 | 888 0 31 | 3191 | 3191 | - | CLL | | | | |
| 1564 | 3191 | 888 0 50 | B7FG | 0795 | | STL | TAPEI | 1F | 93. | INITIALIZE |
| 1565 | HAPE | 888 0 08 | 0999 | 0671 | BOP1 | LIRI | 0999 | | | # 11 # 1 # 11 # 1 # 1 # 1 # 1 # 1 # 1 # |
| 1566 | 0671 | 888 0 31 | 0474 | 0474 | | CLL | 2F | | | |
| 1567 | 0474 | 888 0 29 | 1000 | 0602 | 2 | LDAI | | | | CLEAR SYMBOL TABLE IN MULTIPLE ASSEMBLY. |
| 1568 | 0602 | 888 0 70 | 0604 | 3007 | | ADD | •, | -BOPR | | |
| 1569 | 0604 | 858 0 12 | 0000 | 0000 | | | 12000 | 00000 | | |
| 1570 | 3007 | 898 0 54 | 1000 | 3008 | -BOPR | STL1 | | &BOPR | | |
| 1571 | 3008 | 888 0 0G | 9999 | 0612 | &BOPR | IIRI | 9999 | u-4/ · · | | |
| 1572 | 0612 | 888 0 82 | 0795 | 0474 | -501 // | TEO | 15 | 28 | | |
| 1573 | 0795 | 888 0 50 | BJFC | 3199 | 1 | | CORE | | | |
| 1574 | 3199 | 888 0 50 | 84FC | 3603 | • | | BLANK | | | |
| 1575 | 3603 | 888 0 50 | 87FH | 3207 | | | FTAG | | | |
| 1576 | 3207 | 888 0 50 | BSAC | 0611 | | | ACCUM | | | |
| 1577 | 0611 | 888 0 50 | BEAC | 0615 | | | MUMI | | | |
| 1578 | 0615 | 838 0 50 | 82AC | 0419 | | | LC | | | |
| 1579 | 0419 | 888 0 50 | BJAC | 0423 | | | LINEO | | | |
| 1580 | 0423 | 888 0 OB | 0000 | 0626 | | LIRI | 0000 | -8P | | |
| 1581 | 0626 | BBB 0 54 | 8649 | 0831 | -8P | | 10000 | | | |
| 1582 | 0831 | 888 0 OG | 0001 | 0435 | | IIRI | 0001 | | | |
| 1583 | 0435 | 888 0 70 | 0437 | 0626 | | ADD | | -8p | | |
| 1584 | 0437 | 888 0 99 | 9980 | 0000 | | | 99998 | 00000 | | |
| 1585 | 0627 | 888 0 25 | 0829 | 3031 | &BP | LDA | • | 8F | | |
| 1586 | 0829 | 888 0 00 | 8616 | 8417 | | | D0199 | 00000 | | |
| 1587 | 3031 | 888 0 80 | 7800 | 0446 | 8 | | Y0000 | | | |
| 1588 | 0446 | 88 0 88 | 4800 | 0461 | | | 70000 | | | |
| 1589 | 0461 | 888 0 30 | 0463 | 0465 | | | BGGGG | 99999 | | |
| 1590 | 0465 | 888 0 50 | 8418 | 0469 | | | D0001 | **** | | |
| 1591 | 0469 | 888 0 OB | 0001 | 0472 | | LIRI | 0001 | | | |
| 1592 | 0472 | 888 0 30 | 0674 | 0676 | | LDL | | -BP1 | | |
| 1593 | 0674 | 888 0 GG | GGG9 | 9999 | | | GGGGG | 99999 | | |
| 1594 | 0676 | 888 0 54 | 8418 | 0481 | -BP1 | | 00001 | - · · · | | |
| 1595 | 0481 | 888 0 0G | | 0485 | - - | | 0001 | | | |
| 1596 | 0485 | 888 0 70 | | 0676 | | ADD | | -BP1 | | |
| 1370 | U463 | 999 (70 | 0467 | 9876 | | AUD | | -6P1 | | |

| 1597 | 0487 | 888 0 99 | 9800 | 0000 | | CON | 99980 | 00000 | |
|------|------|----------|------|------|-------|-----|-------|-------|------------------------|
| 1598 | 0677 | 888 0 30 | 0479 | 0681 | ABP1 | | 00000 | 00888 | |
| 1599 | 0681 | 888 0 50 | B6FH | 0685 | | - | HTAG | | |
| 1600 | 0685 | 888 0 30 | 4056 | 0508 | | | ONSW | | |
| 1601 | 0508 | 888 0 50 | 4439 | 0541 | | STL | SWICH | | |
| 1602 | 0541 | 888 0 30 | 4201 | 0953 | | LDL | | | |
| 1603 | 0953 | 888 0 50 | 4200 | 0802 | | STL | START | | |
| 1604 | 0802 | 888 0 25 | 4189 | 0641 | | LDA | -PRI | WRITE | 84. OUTPUT GETS LOADER |
| 1605 | 0641 | 888 0 60 | 8901 | 0445 | WRITE | STA | -OEX | | |
| 1606 | 0445 | 888 0 26 | 8902 | 3902 | | CLA | ACEX | | |
| | | | | | | | | | |

| 1608 | B7AG | 888 1 08 | 0002 | 9669 | END | LIR3 | 0002 | | z. | ENDING OF ASSEMBLY. |
|--------|------|----------|------|-------------|-------|------|------------|-----------------|-------------|----------------------|
| 1609 | 0669 | 898 0 05 | | 0673 | #.14W | LDX | 2F | | | FIND+ M. |
| 1610 | 0673 | 868 0 30 | | 8810 | | LDL | 47 | FIND* | ~ • | LIMIT III |
| 1611 | 0675 | 888 0 67 | | 0871 | | HLT | RA | 2F | | |
| 1615 | 0871 | 888 0 20 | | 0875 | 2 | BUF | 15 | • | 72. | ASSEMBLE TRANSFER |
| 1613 | 0875 | 888 0 05 | | 0679 | - | LDX | 2F | | ~~~ | |
| 1614 | 0679 | 39B 0 30 | | 8900 | | LDL | Er | OTPT* | | |
| 1015 | 0881 | 888 0 25 | | 0687 | | LDA | ACCUM | V 11 1 2 | | |
| 1616 | 0687 | 888 0 60 | | 0491 | | STA | ERROR | | 23. | CLEAN OUTPUT BUFFER. |
| 1617 | 0491 | 888 0 25 | | 0495 | | LDA | 3F | | | |
| 1618 | 0495 | 888 0 60 | | 0502 | | STA | START | | | 4 |
| 1619 | 0502 | 888 0 25 | | 0641 | | LDA | PSUDX | WRITE | | |
| 1620 | 0873 | 888 0 67 | | 0000 | 1 | HLT | НННН | 0000 | | |
| 1621 | 0493 | 888 0 30 | | 0402 | 3 | LDL | , ,, ,, ,, | PAGE* | Z4. | EJECT PAPER |
| 1622 | 0695 | 888 0 30 | | 0402 | _ | LDL | | PAGE * | | |
| 1623 | 0497 | 888 0 05 | | 0501 | | | 04000 | 00000 | 25 . | FINISH FLO |
| 1624 | 0501 | 888 0 30 | | 0560 | | LDL | | TERM* | | |
| 1625 | 0503 | 898 0 67 | | 0703 | | HLT | BOP1 | • | | |
| 1626 | 0703 | 888 0 F2 | | 0500 | | TRW | OTAP1 | | | |
| 1627 | 0500 | 888 0 31 | | 0903 | | CLL | - ' | | Z6. | HALT |
| 1628 | 0903 | 888 0 25 | | 0507 | | LDA | FTAG | | | |
| 1629 | 0507 | 888 0 82 | | 0710 | | TEQ | 1F | | 27 • | FLO#CHARTING |
| 1630 | 0710 | 898 0 F2 | | 0600 | | TRW | OTAP2 | | | |
| 1631 | 9600 | 888 0 F2 | | 0700 | | TRW | OTAP3 | | | |
| 1632 | 0700 | 888 0 G2 | | 0517 | | TRD | 0400 | | | |
| 1633 | 0517 | 888 0 F6 | | 8000 | | TBU | 8000 | 8000 | | |
| 1634 | 0510 | 888 0 G2 | | 0527 | 1 | TRD | OTAPI | | | |
| 1635 | 0527 | 888 0 C7 | 0510 | 0530 | | TBT | 18 | | | |
| - 1636 | 0530 | 888 0 F6 | 7800 | 7801 | | TBU | Y0000 | A0001 | | |
| 1637 | 0877 | 888 0 00 | 0000 | 7905 | 2 | JMP | 0000 | Y0105 | | |
| 1638 | HACE | 888 0 30 | | 0402 | PAT | LDL | | PAGE* | | |
| 1639 | 0670 | 898 0 06 | | 3073 | | CLX | | | | |
| 1640 | 3073 | 888 0 63 | | 0476 | | ZAP | | | | |
| 1641 | 0476 | 888 0 60 | | 3002 | | STA | 0200 | | | |
| 1642 | 3002 | 888 0 65 | | 0825 | | STX | 0223 | | | |
| 1643 | 0825 | 888 0 60 | | 0664 | | STA | 0262 | | | |
| 1644 | 0664 | 888 0 65 | | 0869 | | STX | 0267 | | | |
| 1645 | 0869 | BBB 0 60 | | 0496 | | STA | 0294 | | | |
| 1646 | 0496 | 898 0 65 | | 0701 | | STX | 0299 | | | |
| 1647 | 0701 | 888 0 60 | | 0505 | | STA | 0303 | | | |
| 1648 | 0505 | 888 0 65 | | 0910 | | STX | 0308 | | | |
| 1649 | 0910 | 888 0 60 | | 0727 | | STA | 0325 | | | |
| 1650 | 0727 | 868 0 65 | | 0732 | | STX | 0330 | | | |
| 1651 | 0732 | 855 0 60 | | 0736 | | STA | 0334 | | | |
| 1652 | 0736 | 258 0 65 | | 0741 | | STX | 0339 | | | |
| 1653 | 0741 | 888 0 60 | | 3367 | | STA | 0365 | | | • |
| 1654 | 3367 | 888 0 65 | | 0772 | | STX | 0370 | | | |
| 1655 | 0772 | 898 0 60 | | 3380 | | STA | 0378 | | | |
| 1656 | 3380 | 888 0 65 | 0383 | 0785 | | STX | 0383 | | | |

| - | | | | - | | | | | | | |
|---|------|------|------------|---|----|------|--------------|------|------|-------|------------|
| | 1657 | 0785 | 888 | 0 | 08 | 9999 | 3188 | | LIRI | 9999 | -PAT |
| | 1658 | 3188 | 888 | 0 | OG | 0001 | 0592 | -PAT | IIRL | 0001 | |
| | 1659 | 0592 | 888 | 0 | 30 | 0794 | 0596 | | LDL# | 00005 | 00000 |
| | 1660 | 0596 | 888 | 0 | 82 | 3399 | 3799 | | TEQ | 1F | |
| | 1661 | 3799 | 388 | 0 | 60 | 0218 | 0620 | | STA | 0218 | |
| | 1662 | 0620 | 898 | | 29 | 8418 | 3025 | | LDAI | | |
| | 1663 | 3025 | 888 | | | 0827 | 8920 | | LDX | 0000 | UNDG* |
| | 1664 | 0827 | 358 | | 65 | 0281 | 0683 | | STX | 0281 | 01000 |
| | 1665 | 0683 | 888 | - | 60 | 0286 | 0688 | | STA | | |
| | 1666 | 0688 | 898 | | 29 | 8468 | | | LDA1 | 0286 | |
| | 1667 | 0693 | 888 | | 05 | | 0693 | | | D0051 | i ikingé é |
| | 1668 | | | | | 0895 | 8920 | | LDX | **** | UNDG* |
| | 1669 | 0895 | 888 | | 65 | 0250 | 0652 | | STX | 0250 | |
| | | 0652 | 888 | | 60 | 0255 | 0657 | | STA | 0255 | |
| | 1670 | 0657 | 888 | | 29 | 8518 | 0662 | | LDA1 | D0101 | |
| | 1671 | 0662 | 888 | | | 0864 | 8920 | | LDX | | UNDG* |
| | 1672 | 0864 | 888 | | | 0241 | 0643 | | STX | 0241 | |
| | 1673 | 0643 | 888 | | 60 | 0246 | 0448 | | STA | 0246 | |
| | 1674 | 0448 | 888 | | 29 | 8568 | 0453 | | LDA1 | D0151 | |
| | 1675 | 0453 | 888 | 0 | | 0455 | 8920 | | LDX | | UNDG* |
| | 1676 | 0455 | 888 | | 65 | 0209 | 0811 | | STX | 0209 | |
| | 1677 | 0811 | 888 | 0 | | 0214 | 0416 | | STA | 0214 | _ |
| _ | 1678 | 0416 | 888 | | 11 | 0201 | J188 | | PRN | 0201 | -PAT |
| | 1679 | 3189 | 388 | 0 | | 3333 | 000A | SPAT | HLT | 3333 | RA |
| | 1980 | 3399 | 888 | 0 | 16 | 0016 | 4189 | 1 | PFD | 0016 | -PRI |
| | 1681 | BBAG | 888 | 0 | 25 | 8706 | 0970 | NEW | LDA | A | |
| | 1682 | 0970 | 888 | 1 | 08 | 0000 | 0573 | | LIR3 | 0000 | |
| | 1683 | 0573 | 888 | 0 | 08 | 9999 | 0976 | | LIRI | 9999 | |
| | 1684 | 0976 | 688 | 0 | 05 | 0975 | 3780 | | LDX | 2F | |
| | 1665 | 3780 | 858 | 0 | 30 | 0982 | 8810 | | LDL | 1F | FIND* |
| | 1686 | 0978 | 888 | 0 | 60 | 85FC | 3182 | 2 | STA | ALOC | |
| | 1687 | 3182 | 898 | ٥ | 30 | 3184 | 4530 | | LOL | | PSIGN |
| | 1688 | 3184 | 888 | Q | 32 | 0100 | 3388 | | SHR | 0100 | |
| | 1689 | 3388 | 888 | | 30 | 84FG | 0792 | | LDL | MC | |
| | 1690 | 0792 | 888 | 0 | 90 | 000C | 0796 | | SML | RX | |
| | 1691 | 0796 | 888 | 0 | 25 | 85FC | 0800 | | LDA | ALOC | |
| | 1692 | 0800 | 888 | | 37 | 0400 | 3607 | | SHL | 0400 | |
| | 1693 | 3607 | 888 | | | 3009 | AOOD | | ADD | | RA |
| | 1694 | 3009 | 888 | | | 0000 | BJAG | | STL | 0000 | PSUDX |
| | 1695 | 0982 | 888 | | | 8706 | 0986 | 1 | LDA | A | , 500 |
| | 1696 | 0986 | 888 | | | 0789 | 0789 | • | CLX | ~ | |
| | 1697 | 0789 | | | 69 | 1000 | 3202 | | STX1 | STAB | |
| - | 1698 | 3202 | 898 | | 32 | 0200 | 3807 | | SHR | 0200 | |
| | 1699 | 3807 | 888 | | | 3209 | 3011 | | BUF# | | 88000 |
| | 1700 | 3011 | 888 | | | 0413 | 0815 | | LDX | 1F | 90000 |
| | 1701 | 0815 | | | 77 | 0815 | 0818 | | | 15 | |
| | 1702 | 0818 | 888 | | | 0000 | | | ATL | ev. | SRCH* |
| | 1703 | 0413 | 888 | - | | 3015 | 9712 | 1 | LDA | RX | |
| | 1704 | 3015 | 888 | | | 0100 | 4530 | • | LDL | 0.00 | PSIGN |
| | 1705 | 0619 | 888 | | | B4FG | 0619 0623 | | SHR | 0100 | |
| | 1706 | 0623 | 888 | | | _ | | | LDL | MC | |
| | -140 | U423 | 200 | U | 70 | 000C | 3027 | | SML | RX | |

SPECIAL SECRET OP NEW
FIND A. IF UNDEFINED PUT IT AS OP IN
SYMBOL TABLE WITH EQUIVALENT IN M AND C.
IF DEFINED PUT CONTENTS OF M AND C INTO
THE GADAAD PROGRAM IN THIS LOCATION.

| 1707 | 3027 | 888 0 54 | 2000 | BJAG | | STLI | ETAB | PSUDX |
|------|------|----------|------|------|-------|-------|--------|-------|
| 1708 | a736 | 888 0 60 | BJFB | 0740 | ERR1# | | TEMP | , |
| 1709 | 0740 | 888 0 65 | 84F8 | 0544 | | STX | TEMP1 | |
| 1710 | 0544 | 888 1 OG | 0001 | 0748 | | 11R3 | 0001 | |
| 1711 | 0748 | 888 0 06 | 0751 | 0751 | | CLX | | |
| 1712 | 0751 | 888 0 32 | 0400 | 0758 | | SHR | 0400 | |
| 1713 | 0758 | 888 0 05 | 0760 | 8760 | | LDX | 1F | ERR2+ |
| 1714 | 8760 | 888 0 20 | 86F8 | 0766 | ERR2* | BUF | ERROR | |
| 1715 | 0766 | 388 0 37 | 0100 | 3170 | | SHL | 0100 | |
| 1716 | 3170 | 888 0 60 | Bofb | 0974 | | STA I | ERROR | |
| 1717 | 0974 | 888 0 60 | BSAC | 0000 | | STA | ACCUM | RX |
| 1718 | 0760 | 888 1 OG | 9999 | 0764 | 1 | IIR3 | 9999 | |
| 1719 | 0764 | 888 0 25 | 83F8 | 0968 | | LDA ' | TEMP | |
| 1720 | 0968 | 888 0 05 | 84F8 | 0008 | | FDX . | TEMP 1 | RL |

ERROR SUBROUTINE
ACCUMULATES IN ERROR THE ERROR CODES
FOR A LINE.
ERRI*: CODE IS RB3+1. INDICATING THE FIELD
EXIT IS IN RL.

ERRZ## CODE IS IN RA. EXIT IS IN RX.

| | - | | | | |
|------------|----------------|------------|------------|------------|--|
| 0000044044 | 44 | 0055544044 | 0000ეეე | 0000544044 | 0027544044 |
| 0000544044 | * - | 0055544044 | 0000010000 | 0000544044 | 0000544044 |
| 0000000044 | * ** 14 | 0000544044 | 0000020000 | 0005544044 | 0055544044 |
| 0000000004 | ₩~ | 0005544044 | 0000030000 | 0000044044 | 0000044044 |
| 0000044044 | erganic | 0055544044 | 0000040000 | 0055544044 | and the second s |
| 0000000044 | *** | 0005544044 | 0000050000 | 0005544044 | 0005544044 |
| 0005544044 | / sgt | 0055544044 | 000060000 | | 0000544044 |
| 000000000 | 76.5 | 0000544044 | 0000070000 | 0055544044 | 0005544044 |
| 0000004044 | 84 | 0005544044 | 000000000 | 0005544044 | 0055544044 |
| 0000000044 | | 0055544044 | 000000000 | 0005544044 | 0000544044 |
| 0000544044 | | 0055544044 | | 0055544044 | 0005544044 |
| 0000004044 | | 0005544044 | 0000100000 | 0000044044 | 0000544044 |
| 0000544044 | • • | 0000544044 | 0000110000 | 0055544044 | 0005544044 |
| 0005544044 | | | 0000120000 | 0055544044 | 0000544044 |
| 0005544044 | €र≽ | 0005544044 | 0000130000 | 0055544044 | 0005544044 |
| 0000004044 | | 0000044044 | 0000140000 | 0055544044 | 0000544044 |
| | ** | 0005544044 | 0000150000 | 0055544044 | 0005544044 |
| 0005544044 | 4. | 0005544044 | 0000160000 | 0055544044 | 0000544044 |
| 0055544044 | w.i | 0055544044 | 0000170000 | 0005544044 | 000000044 |
| 0000044044 | rillani | 0000544044 | 0000180000 | 0055544044 | 0000044044 |
| 0000544044 | 20,111 | 0000044044 | 0000190000 | 0055544044 | 0055544044 |
| 0000544044 | **** | 0000544044 | 0000200000 | 0055544044 | 0000004044 |
| 0055544044 | 12/4" | 0000044044 | 0000210000 | 0055544044 | 0000544044 |
| 0000044044 | •• | 0005544044 | 0000220000 | 0055544044 | 0000544044 |
| 0000544044 | ** | 0000004044 | 0000230000 | 0055544044 | 0005544044 |
| 0055544044 | ••• | 0000544044 | 0000240000 | 0055544044 | 0000044044 |
| 0000004044 | | 0000044044 | 0000250000 | 0055544044 | 0000044044 |
| 0050544044 | | 0000544044 | 0000260000 | 0055544044 | 0000044044 |
| 0000004044 | | 0000044044 | 0000270000 | 0000544044 | 0005544044 |
| 0055544044 | | 0005544044 | 0000280000 | 0055544044 | |
| 0000044044 | | 0000544044 | 0000290000 | 0055544044 | 0000044044 |
| 0055544044 | | 0005544044 | 0000300000 | 0005544044 | 0000544044 |
| 0000004044 | | 0000044044 | 0000310000 | 0055544044 | 000000004 |
| 0055544044 | | 0005544044 | 0000320000 | 0000544044 | 0000544044 |
| 0005544044 | | 0000544044 | 0000330000 | 0055544044 | 0000004044 |
| 0055544044 | | 0005544044 | 0000340000 | | 0005544044 |
| 0005544044 | | 0000544044 | 0000350000 | 0055544044 | 0000004044 |
| 0000544044 | | 0005544044 | 0000360000 | 0055544044 | 0000544044 |
| 0005544044 | | 0000544044 | 0000370000 | 0000544044 | 0000044044 |
| 0000544044 | | 0000544044 | 0000380000 | 0055544044 | 0055544044 |
| 0055544044 | | 0055544044 | 000390000 | 0055544044 | 000000044 |
| 0055544044 | | 0055544044 | 000040000 | 0055544044 | 0000004044 |
| 0000544044 | | 0005544044 | | 0000544044 | 0005044044 |
| 0055544044 | | | 0000410000 | 0000544044 | 0000004044 |
| 0000544044 | | 0055544044 | 0000420000 | 0055544044 | 0000044044 |
| 0055544044 | | 0000544044 | 0000430000 | 0005544044 | 0005044044 |
| 0005544044 | | 0055544044 | 0000440000 | 0005544044 | 0002044044 |
| | | 0000044044 | 0000450000 | 0000544044 | 0000044044 |
| 0005544044 | | 0005544044 | 0000460000 | 0035544644 | 0000044044 |
| 0055544044 | | 0005544044 | 0000470000 | 0000544044 | 0077044044 |
| 0005544044 | | 0055544044 | 0000430000 | 0000544044 | 0007044044 |
| 0055544044 | | 0005544044 | 0000490000 | 0055544044 | 2222000004 |
| | | | | | |

| 1722 | | | | | | SLR | 0000 | 4999 |
|-------|------|----------|------|------|-------|------|--------|----------------|
| 1723 | | | | | | BLA | Y0003 | Y0199 002 |
| 1724 | | | | | | BLR | A0101 | Y0105 004 |
| 1725 | 0000 | 888 0 67 | 0000 | 0000 | 0000 | HLT | 10200 | * |
| 1726 | 7801 | 888 0 25 | 7803 | 7805 | Y0001 | LDA | 1F | • |
| 1727 | 7805 | 888 0 60 | 7902 | 7907 | .0001 | STA | Y0102 | 2F |
| 1728 | 7907 | 858 0 G2 | 0500 | 7925 | 2 | TRD | OTAPI | 6 7. |
| 1729 | 7925 | 888 0 C7 | 7931 | 7925 | 4. | TBT | UIA. I | _ |
| 1730 | 7931 | 888 0 87 | 7935 | 7937 | | TGR | | * 3F |
| 1731 | 7935 | _ | | | | | | |
| | | 85B 0 67 | 7935 | 7907 | _ | HLT | | 28 |
| 1732 | 7937 | 888 0 F6 | 8600 | 7901 | 3 | TBU | 8600 | A0101 |
| 1733 | 7803 | 888 0 67 | 7803 | 7937 | 1 | HLT | | 38 |
| 1734 | 7901 | 888 0 08 | 0000 | 7905 | Y0101 | LIR1 | 0000 | Y0105 |
| 1735 | 7905 | 888 0 34 | 8601 | 7807 | Y0105 | LDL1 | 8601 | , |
| 1736 | 7807 | 888 0 29 | 8603 | 7809 | | LDAI | 8603 | |
| 1737 | 7809 | 888 0 37 | 0400 | 7817 | | SHL | 0400 | |
| 1738 | 7817 | 888 0 90 | OOOA | 7821 | | SML | RA | |
| 1739 | 7821 | | | | | | | 440000 |
| | | | 7823 | 7825 | | ERS# | ООННН | H 0 000 |
| 1740 | 7825 | 888 0 20 | 7827 | 000A | | BUF | | RA |
| 1741 | 7827 | 888 0 50 | 0000 | 7811 | | STL | 0000 | |
| 1742 | 7811 | 898 0 OG | 0004 | 7815 | | IIRI | 0004 | |
| 1743 | 7815 | 888 0 30 | 7819 | 7829 | | LDL# | 00020 | 00000 |
| 1744 | 7829 | 888 Q 82 | 7907 | 7905 | | TEQ | 28 | Y0105 |
| 1745 | | 4 05 | | | | | | 10103 |
| 41 7J | | | | | | END | 80P | |

SIMPLE OBJECT PROGRAM LOADING ROUTINE GOES INTO BAND 7800+ THE ODD LOCATIONS.

IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED. IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS. FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION OF SPERRY RAND CORPORATION AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION.

_

IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED. N WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WHYTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION, UPON DEMAND.

* ?. GADAAD ASSEMBLER PASS 2.

* TABLE OF CONTENTS

* A. AJST* SUBROUTINE.

* B. BEGINNING OF ASSEMBLY

* C. CONTROL OPS.

* D. DEFINE ADDRESS (DEFN*)

* E. EDIT INPUT CARD

* F. FIND AND RESERVE BEST LOCATION (FARB*)

* L. PROCESS A ADDRESS.

* O. OUTPUT SUBROUTINE.

* P. PROCESSING OF INSTRUCTIONS.

* G. MASTER ADDRESS CALCULATOR (FIND*)

* S. SYMBOL TABLE SEARCH (SRCH*

* X. EXAMINE REMARKS FIELD

* Z. ENDING OF ASSEMBLY.

* THIS PASS DOES THE ACTUAL ASSEMBLY.

* THE SHOW BEGINS AT ROUTINE B.

| (IN |) | | | | |
|---------------|--|----------------------|-------------------|---------------------------------------|------|
| 0148 | | | | | |
| S1. SCRAMBLE | , 11 galaga 11 | • ! • | | | |
| 0154 | | 0) • • • • • • • • • | | | |
| S2. SYMBOLITA | ABLE |) EG: | • • • • • • • • • | *********** | DEF |
| 0158 | | EQ: | ••••• | | |
| SJ. TABLE:ZEF | 30) | NEQ:)0 | : | | |
| 0162 | | ********* | ••••• | | |
| S4. NOT FOUND |) , | ! | | • • • • • • • • • • • • • • • • • • • | NOEF |

- SYMBOL TABLE SEARCH (SRCH+) THIS SUBROUTINE LOOKS UP A 5-CHARACTER QUANTITY TO SEE IF IT IS IN THE SYMBOL TABLE. OP-CODES . REGIONAL ADDRESSES . PAIR ADDRESSES . AS WELL AS SYMBOLIC ADDRESSES ARE KEPT IN THE SYMBOL TABLE. THERE ARE TWO EXITS DEPENDING ON WHETHER THE SYMBOL IS OR IS NOT IN THE TABLE. ALL REFERENCES TO THE SYMBOL TABLE ARE MADE VIA SRCH+.
- SI. SCRAMBLE THE SYMBOL IS CONVERTED TO A THREE-DIGIT NUM-BER TO INDICATE WHERE THE SEARCH WILL START. THIS SPEEDS UP THE SEARCH CONSIDERABLY.
- 52. SYMBOLITABLE IF THE SYMBOL IS AT THIS PLACE IN THE TABLE. GO TO DEF.
- S3. TABLE: ZERO IF THE TABLE ENTRY IS ZERO. GO TO S4. OTHERWISE WE MOVE TO THE NEXT TABLE ENTRY AND RETURN TO \$2.
- 54. NOT FOUND. WE HAVE ENCOUNTERED A NEW SYMBOL SINCE THE TABLE IS INITIALLY ALL ZEROES. STORE THE NEW SYMBOL IN THE TABLE MERE AND GO TO UNDEF.
- CODING DETAILS: ON INPUT. RL IS THE SYMBOL. RA IS UNDEF. AND RX IS DEF. OUTPUT IN RBI IS THE LOCATION IN THE TABLE. AND IF DEFINED THE EQUIVALENT OF THE SYMBOL APPEARS IN RA. THERE IS ROOM FOR 1000 SYMBOLS. IF THE 1001ST SYMBOL COMES ALONG. THE MACHINE LOOPS INDEFINITELY.

| (IN |) | | | | | | | | |
|----------------|---|---------------------------------------|-----------|-----------|--|---|----------------|-------------|-----|
| 0180 | : : | * | | | | • ÷ | | | |
| (F1. EXAMINE | | ~~~) ~~~) | D 1. | |) • • • • • • • • • • • • • • • • • • • | 0 V | 1 | | |
| | | 47a Maji | NN I | •••• | | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | |
| 0209 | 0(****** | * * * * * *** | • • • • • | •••• | • • • • • • • • • • • • • • • • • • • | :•••••((|) | | |
| F2. USE HAN | DEVEL | · · · · · · · · · · · · · · · · · · · | | 1 | | : : | | | |
| 0217 | 0(| • • • • | •••• | •••• | | t 0 | | | |
| F3. ADJUST | FOR PAIRS | | ••••• | | | ! !•••••)(| | | |
| 0228 | 0(••••• | • • • • • | ••••• | ••••{ | : : | ; ; ; | | | |
| F4. ROOM IN | CORE | ·) | NO: . | •••• |) (| 0 | | | |
| YES: | ! ! | | | | | 2 | | | |
| F5, ASSIGN | ORE ADDR | . 1 | ••••• | •••• | ••••• | ••••• | ••••• | •••• E | TIX |
| 0246 | 0(••••• | • • • • | ••••• | •••• | ••••• | •••••• | | | |
| F6. INITIAL | | 1 | | | | |) - | | |
| 0264 | 1 0 (• • • • • • • • • • • • • • • • • • | •••• | ••••• | •••• |) | | | | |
| F7. TRY LEVE | | • | OK: . | •••• | • | 0 1 | | | |
| NO: | : : | | MF a s | | | ‡ ‡ | | | |
| (F8. DRUM EXI | | · · ·) | | •••• | | ! • • • • • • • • • • • • • • • • • • • | ·····) | 0 ! ! | |
| 0309 | 0(| •••• | ••••• | • • • • • | •••••(| Ö | | 1 | |
| F9. CALCULA | TE AODRES | 5 i | | | | | | : : | |
| y | ; ; | , | | | | | | • | |

- F. FIND AND RESERVE BEST LOCATION (FARB*)
 THIS SUBROUTINE IS USED TO CHOOSE LOCATIONS
 FOR A M OR C ADDRESSES OF INSTRUCTIONS.
 THE CORRESPONDING H-FIELD IS INTERPRETED AND
 THE CHOICE IS MADE ON THIS BASIS.
- FI. EXAMINE H-FIELD

 IF IT SPECIFIES C(CORE) GO TO F4.

 IF IT SPECIFIES D(DRUM) OR IS BLANK.

 GO TO F3 WITH RB6 SET TO O.

 IF IT SPECIFIES H(HIGH SPEED BANDS).

 GO TO F3 WITH RB6 EQUAL TO 2.

 THREE NUMERICS OR +NN MEANS A HAND-PICKED

 LEVEL OR A CHANGE IN LEVEL ON THE DRUM. TO F2.

 TWO NUMERICS MEANS A HANDPICKED HIGH SPEED

 LEVEL. GO TO F2.

 ANY OTHER MEANS THE H-FIELD IS IN ERROR.

 GO TO F3 AND TREAT AS BLANK.
- F2. USE HAND LEVEL

 THE H-FIELD SPECIFIES A HAND PICKED LEVEL.

 THIS SUPERCEDES THE LEVEL CALCULATED

 BY GADAAD. ALTHOUGH IT WILL BE CHECKED

 LATER BY THE AJST* ROUTINE.
- F3. ADJUST FOR PAIRS

 IF RB2 CONTAINS 5 AT THIS POINT WE HAVE
 A PAIR ADDRESS. AND RB6 IS INCREASED BY 1.

 THE CALCULATED LEVEL IS ADJUSTED 1 IF IT IS
 A MINUS-PAIR ADDRESS. RB6 IS NOW EQUAL TO:

 0: LOOK ON DRUM
 1: LOOK FOR PAIR ON DRUM
 2: LOOK FOR HIGH SPEED
 - 2: LOOK FOR HIGH SPEED

 3: LOOK FOR PAIR ADDRESS IN HIGH SPEED AREA
 THE SETTING OF RB6 IS USED TO CONTROL THE
 APPROPRIATE OPERATIONS BELOW. GO TO F6.
- F4. ROOM IN CORE

 IF RB2 CONTAINS 5 WE HAVE A PAIR ADDRESS AND

 MUST RESERVE 2 LOCATIONS. OTHERWISE 1 LOCATION IN CORE. IF THERE IS NO ROOM LEFT IN

 THE BOOO-B999 AREA. A SEMICOLON ERROR

 INDICATION IS GIVEN AND WE TRY HIGH SPEED

 ACCESS BY GOING TO F3.
- F5. ASSIGN CORE ADDR.

 CALCULATE THE EQUIVALENT OF THIS ADDRESS

 AND THE ADDRESS ONE LESS IN CASE OF A PAIR
 ADDRESS. EXIT.
- F6. INITIALIZE
 CALCULATE THE STARTING DRUM LEVEL: AND ALSO
 MAKE AN EXTRA COPY OF LEVEL 199 AS LEVEL -1
 IN CASE OF PAIR ADDRESS PROCESSING:
- F7. TRY LEVEL

 IF A DRUM ADDRESS SATISFYING ALL THE

 REQUIREMENTS INDICATED BY RB6 EXISTS ON THIS

 LEVEL. GO TO F9.
- F8. DRUM EXHAUSTED

 IF THE LEVEL WAS HAND CALCULATED, A SEMICOLON
 ERROR IS INDICATED THE FIRST TIME STEP F8

 IS EXECUTED.

 IF WE HAVE GONE ALL THE WAY AROUND THE DRUM.
 A SEMICOLON ERROR IS GIVEN AND THE ADDRESS

0000 IS ASSIGNED. TO FIL.

IF WE HAVE EXHAUSTED THE HIGH SPEED BANDS. A SEMICOLON ERROR IS GIVEN AND WE TRY THE WHOLE DRUM. GOING TO F6.
OTHERWISE WE STEP TO THE NEXT DRUM LEVEL AND RETURN TO F7.

F9. CALCULATE ADDRESS

WE TRY TO FIGURE DUT WHAT DRUM ADDRESS WE
HAVE FOUND. PICKING THE SMALLEST ACCEPTABLE
ADDRESS ON THIS LEVEL. A SINGLE WORD OF
40 BITS IS KEPT FOR EACH DRUM LEVEL.
CORRESPONDING TO BANDS OF THRU 78. THE 5-BITS
COVER BANDS OF THRU 18. 4-BITS 20 THRU 38.
AND SO ON.

FIO.RESERVE ADDRESS.

FOR A PAIR ADDRESS THE ADDRESS IN THIS BAND
ON TWO ADJACENT LEVELS IS RESERVED.

OTHERWISE A SINGLE ADDRESS IS RESERVED. BY
TURNING ITS BIT OFF IN THE TABLE. AFTER THE
OPERATION: LEVELS -1 AND 199 ARE COMBINED
AS LEVEL 199.

F11.FINISH UP CALCULATE THE ADDRESS ADJACENT TO THE ONE FOUND IN CASE OF A POSSIBLE MINUS-PAIR ADDRESS: AND EXIT.

CODING DETAILS:
INDEX REGISTERS 1 2 AND 3 ARE NOT CHANGED BY
FARB+. ON INPUT THE H FIELD IS SPECIFIED
BY RB3. THE CALCULATED BEST DRUM LEVEL IS IN
RA. AND THE EXIT IS IN RL. THE OUTPUT
LOCATION FOUND IS IN RA AND AN ADJACENT
LOCATION IS STORED IN A SPECIAL TABLE.

| | | | | | | | - | | | | | | |
|--|--|----------------|-------------|-----------|-----------|----------------|---------|--------|--------------|---------------|---------------|------------|-----------------|
| (IN |) | · | | | | | | | | | | | |
| | : | | | | | | | | | | | | |
| 0377 | : | u | | | | | - | | | | | | |
| | |) | BLK | | • | | , | | | | | | |
| Q1. WHAT KI | ND | | *: | | | | - | | | _ | | | |
| | | } | | | | | - | | - | |) | 0 | |
| | | | NF 1 | |) | 0 | : | - • | • • ; | ì | | ŧ | |
| | | | | | | • • • | | | 1 | | _ | 1 | |
| | | | N: +-: | | | | | | • | | 0 • • • • | : | ð |
| | | *** | | | | 1 | 1 | .) | o i | 1 | 1 | 1 | \$ |
| | | | SYM | •••• | | • • • • | 1 | :. | ! • ! | ••• | * • • • | 1 | ٧ |
| | 0(| •••• | • • • • • | | . (0 | • | 1 | : | \$ 2 | : : | : 1 | : 1 | : ! |
| 0419 | 1 . | *** | | | | \$ | 1 | 1 | 2 1 | ŧ | 1 | 1 | : |
| Q2. BLANKIZ | | ~~~) | , EOF: | ••••• | • • • • • | • | | • | * • 1 | i • • • | • | ! ! | UNDEF |
| | |) | NEQ | | | ! | !••• | | • • | • | : | :••• | DEF |
| | 0 | ₩. | | | | 1 | : | \$ | | 1 | ŧ | • | 1 |
| 0423 | 0{***** | 4 • • • | • • • • • | • • • • | •••• | # * (! ! | 0 | : : | : | ; 1 | ‡ • | • | ‡ • |
| | ******* | | • | | | : | • | : | • | , } | : | : | ! |
| Q3. 'A' LOC | ATION | | ••••• | •••• | •••• | | •••• | 1. | | ••• | | | DEF |
| | **** | | • | | | i 1 | | • | ; ; | } } | : | • | : : |
| | 01 | •••• | • • • • • | | | | •••• | | 1(0 | | | t | i |
| 0428 | : | , | _ | | * 1 | 1 | | : | • | | 1 | • 1 | 1 |
| Q4. CHANGE | TO R0000. | ~ - | : | | | : ! . • . : | • • •.• | : | : ! | | ; ! : | : :•••\ | 1 √ |
| | **** | | • | _ | | 1 | | ŧ : | ı | | \$ | | • |
| | 01 | | • - • | | | ! | | : | | | | 1 | : |
| 0434 | 1 | •••• | • • • • • | | | • • • • • • | •••• | 1 | : | ••• | : • • \\ : | | I |
| AS SDAAFCE | ************************************** |) | | • • • • | •••• | | •••• | *•1 | / | | 1 | 1 | 1 |
| Q5. PROCESS | ABS ADUR | | OK: | | | : : | | | ! • | | • | ! | : : Def |
| | | • | | | | 1 | | 1 | | ••• | 1 | | : 027 |
| 0442 | 0(***** | • • • • | • • • • • | • • • • • | • • • • • | | •••• | : ((|) | | t , | 1 | ŧ |
| | · · | | • | | | € . \$ | | | ; : | : | ! ! | 1 | : : |
| Q6. ERROR | | | | | | | •••• | 2 . | • | • • • | ! • • • • | •••• | DEF |
| **** | **** | | • | | | 1 | | 1 | ! | | 1 | 1 | : |
| | 0(***** | •••• | • • • • • • | | ••••(| 9 | | • | : : | | 1 2 | | : : |
| 0452 | | # . | =0. | | | | | 1 | • | | ŧ | | |
| Q7. I(N) : ZE | | ; |) Fai | • • • • • | | • • • • | •••• | 1. | ! . | • • • | ! • • • · | • • • • | UNDEF |
| *** | |) | NEO | | • • • • • | • • • • | • • • • | 1. | • | • • • | ! • • • : | •••• | DEF |
| | 0(••••• | ه د د د | _ | | | | | : | 1 | | 1 | | t |
| | | | | | | | •••(| 0 | Į. | | t | | Ţ |
| 0456 | 1 | | | | | | | | ŧ | | 1 | | 1 |
| ************************************** | | | EQ: | •••• | | • • • • | •••• | • } (| t | | 1 1 | | : ! |
| | : RO |) |) | • | | • | | | - | | t : : | | : : : DEF |

- G. MASTER ADDRESS CALCULATOR (FIND*)
 THIS SUBROUTINE IS GIVEN THE CONTENTS OF
 THE SYMBOLIC A.M. DR C FIELD OF THE CARD AND
 ANALYZES IT. THERE ARE TWO EXITS. ACCORDING
 TO WHETHER THE ADDRESS IS DEFINED OR NOT.
- Q1. WHAT KIND

 IF BLANK GO TO Q2.

 IF SELF. GO TO Q3.

 IF FOUR RIGHTHAND PARTS ARE NUMERIC. TO Q4.

 IF THE LEFTMOST CHARACTER IS BLANK. HOWEVER.

 GO TO Q5.

 IF LOCAL FORWARD ADDRESS. TO Q7.

 IF LOCAL BACKWARD ADDRESS. TO Q8.

 IF LOCAL PLAIN ADDRESS N. TO Q9.

 IF PAIR ADDRESS. SET RB2 TO 5 AND GO TO Q10.

 IF THE SYMBOL FAILS TO PASS THE ABOVE AND BEGINS WITH A NUMERIC. GO TO Q6.

 OTHERWISE IT IS SYMBOLIC: WE SET RB2 TO 4
- AND GO TO Q10.

 Q2. BLANK: ZERO

 IF 'BLANK' IS ZERO, THE BLANK ADDRESS IS

 UNDEFINED, AND WE GO TO UNDEF,

 ELSE TO DEF.
- Q3. 'A' LOCATION
 THE * IS DEFINED AS THE VALUE OF A LOCATION.
 IF IT APPEARS IN A. OR IN CERTAIN CONTROL OPS
 IT IS THE VALUE OF THE PRECEDING A LOCATION.
 TO DEF.
- Q4. CHANGE TO ROODO.

 CHANGE THE REGIONAL ADDRESS TO ROODO AND SET RB2 TO ZERO. WE GO THEN TO LOOK THIS UP IN THE SYMBOL TABLE. AT STEP Q10.
- Q5. PROCESS ABS ADDR.

 IF ANY PART OF THE ADDRESS IS BLANK OR
 HAS ZONES OF 2 OR 3. GO TO Q5. OTHERWISE
 USE THE ZONES TO PRODUCE UNDIGITS FOR ABCFGH.
 AND SEND THE RESULTING ADDRESS TO DEF.
- 96. ERROR SET UP ERROR FLAG FOR CURRENT FIELD AND SET THE ADDRESS TO ZERO. TO DEF.
- Q7. I(N):ZERO
 IF THE FORWARD LOCAL TABLE ENTRY FOR N IS
 ZERO IT IS UNDEFINED: WE GO TO UNDEF. ELSE IT
 IS DEFINED AND DEF.
- Q8. J(N):ZERO

 IF THE BACKWARD LOCAL TABLE ENTRY FOR N IS
 ZERO IT IS UNDEFINED AND WE GO TO Q6 SINCE
 THIS SHOULDN'T HAPPEN. ELSE IT IS A
 DEFINED ADDRESS WHICH IS SENT TO DEF.
- G9. I(N):ZERO

 IF THE FORWARD LOCAL TABLE ENTRY FOR N IS

 ZERO THIS ADDRESS IS UNDEFINED. GO TO UNDEF.

 ELSE IT IS DEFINED AND WE TRANSFER IT TO THE

 BACKWARD LOCAL TABLE AND EXIT TO DEF.

 IN EITHER CASE RESET FORWARD LOCAL ENTRY O.
- 910.SRCH+ SEARCH FOR THE ITEM IN THE SYMBOL TABLE.

| 0461 | 0(•••••• | •••••••• | t |
|---------------|---|---|-------|
| (| * ************************************ | EQ: | UNDEF |
| (Q9. I(N) 12 | ERO) | | 1 |
| (| | NEQ: | DEF |
| | A . | | 1 |
| 0467 | 1 | • |) |
| - | | DEF: | . DEF |
| (Q10.SRCH+ |) | | |
| (| | UND: | UNDEF |

IF FOUND . GO TO DEF . ADJUSTING FOR REGIONAL ADDRESS IF NECESSARY. IF NOT FOUND . WE GO TO UNDEF.

CODING DETAILS!

INPUT TO FIND* IS DEF IN RX AND UNDEF IN RL.

RB3 CONTAINS THE FIELD TO BE EXAMINED.

AT EXIT DEF. RA CONTAINS THE DEFINED

EQUIVALENT IN ITS C ADDRESS POSITION.

AT EXIT UNDEF. RB2 CONTAINS INFORMATION

ABOUT THE TYPE OF ADDRESS AS FOLLOWS:

O: REGIONAL

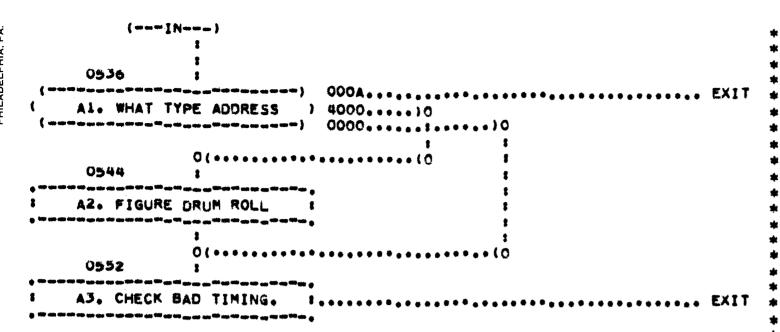
- 11 LOCAL FORWARD N IS IN RB5
- 21 BLANK
- 3: LOCAL PLAIN N IS IN RB5
- J: SYMBOLIC SPOT IN SYMBOL TABLE IS RB1
- K: PAIR ADDRESS RB5 IS O FOR &. 1 FOR -.

| | () | [N) | | |
|------|------------|---|---|-----|
| | 0493 | | | |
| |)1. WHAT T | YPE | N: t E | |
| | 0501 | 0(************************************* | ••••••••(0 | |
| = | 2. CALCUL | | • | XIT |
| | 0509 | 1 | ••••••••••••••••••••••••••••••••••••••• | |
| : () | 3. STORE | T#0. | 1 E | XIT |

- D. DEFINE ADDRESS (DEFN*) THIS SUBROUTINE IS USED AFTER FIND* HAS DETERMINED AN ADDRESS IS UNDEFINED. IF THIS IS NOT AN ERROR CONDITION, SOME WAY OF CALCULATING AN ADDRESS, USUALLY FARB+, IS USED AND THEN THIS ROUTINE DEFN+ TAKES OVER.
- DI. WHAT TYPE IF THE ADDRESS TO BE DEFINED IS REGIONAL. GO TO D2. IF LOCAL FORWARD . ENTER IN I TABLE AND EXIT. IF BLANK. ENTER IN 'BLANK' AND EXIT. IF LOCAL PLAIN. ENTER IN J TABLE AND EXIT. IF SYMBOLIC. ENTER IN EQUIVALENTS TABLE, EXIT IF PAIR ADDRESS. GO TO DJ.
- D2. CALCULATE BASE REGIONAL ADDRESSES ARE DEFINED ONLY BY CONTROL OPS LIKE BLR. THE DEFINING ADDRESS MINUS THE INCREMENT. THE ADDRESS CORRESPON-DING TO ROODO. IS STORED IN THE EQUIVALENTS TABLE. EXIT.
- D3. STORE TWO. THE DEFINED ADDRESS IS STORED IN THE SYMBOL TABLE. THEN & IS CHANGED TO - OR VICE VERSA AND THAT SYMBOL PLUS ITS EQUIVALENT ARE ALSO STORED AWAY. THE ASSUMPTION IS MADE THAT FARB* WAS USED TO CALCULATE THE ADDRESSES. EXIT.

CODING DETAIL! THE EXIT IS INPUT IN RL AND THE CALCULATED ADDRESS IN RA. OTHER INPUTS ACTUALLY USED ARE R82 TO TELL THE TYPE, AND R81 AND R85 TO GIVE EXTRA INFORMATION AS SUPPLIED BY THE FIND* SUBROUTINE. AT EXIT. RA CONTAINS THE

DEFINED EQUIVALENT.



- AJST* SUBROUTINE. THIS SUBROUTINE IS PART OF THE WAY GADAAD FINDS LATENCY. AJST# IS USED ON M AND C ADDRESSES. FIRST AN OPTIMUM LEVEL *OPTIM* IS CALCULATED BY QADAAD! AJST* USES THIS TO FIND THE CURRENT LEVEL, GIVEN THE ACTUAL H OR C ADDRESS.
- AL. WHAT TYPE ADDRESS IF THE ASSIGNED ADDRESS D HAS ANY UNDIGITS IT IS ASSUMED TO BE IMMEDIATE ACCESS AND OPTIMO IS THE ANSWER. EXIT. IF THE ASSIGNED ADDRESS D IS ON THE HIGH-SPEED BANDS: GO TO A2. IF THE ASSIGNED ADDRESS D IS ON THE STANDARD PART OF THE DRUM D IS THE ANSWER. GO TO A3.
- A2. FIGURE DRUM ROLL THE ANSWER IS D-OPTIM MODULO 50. ADDED TO OPTIM.
- A3. CHECK BAD TIMING. IF D COMPARED TO OPTIM INDICATES A WAIT OF 48 OR 49 ON HSB OR OF 198 OR 199 ON REST OF DRUM. THE ERROR FLAG - IS PUT ON THE LISTING. CODING DETAILS:

INPUT IS THE ASSIGNED ADDRESS IN RA AND THE EXIT IN RL. OUTPUT IN RA IS SOME LOCATION ON THE APPROPRIATE DRUM LEVEL. EXIT.

- O. OUTPUT SUBROUTINE.
 THIS ROUTINE IS USED TO TRANSMIT AN ASSEMBLED INSTRUCTION TO THE OUTPUT TAPE.
- O1. TRANSFER
 THE LOCATION IS IN THE FORM RRROSOAAAA WHERE
 RRR ARE RELOCATION DIGITS COPIED FROM THE
 CARD, S IS THE ASSEMBLED SIGN, AND AAAA IS
 THE ASSEMBLED LOCATION. MOVE THE LOCATION
 AND THE ASSEMBLED INSTRUCTION INTO THE
 OUTPUT BUFFER.
- O2. BUFFER FULL

 IF THE BUFFER DOES NOT HAVE SO INSTRUCTIONS.

 EXIT.
- O3. WRITE TAPE WRITE THE BUFFER OUT ON THE OUTPUT TAPE AND CLEAR THE BUFFER AGAIN. EXIT.

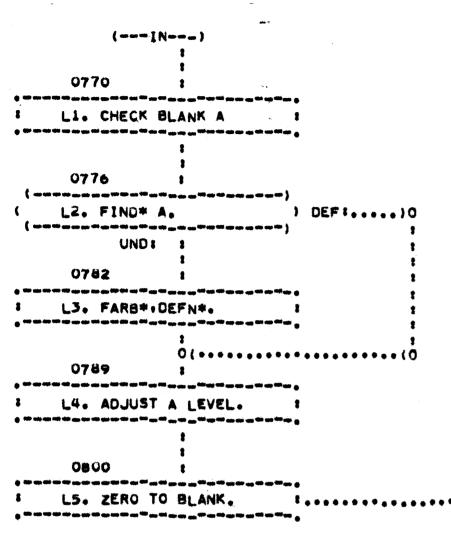
```
(--- IN---)
 0618
E1. CHECK LINE NO.
      OK!
 0623
EZ. TRANSFER
0642
E3. SEPARATE OFF R. H.
8660
E4. MOVE COMMENTS
 0690
E5. CONSTRUCT CONSTANTS :
0704
E6. EDIT OF CODE.
0715
E7. INPUT BUFFER EMPTY ) NO: .....)
0720
EB. SWAP BUFFERS
0753
```

```
EDIT INPUT CARD.
    THIS IS WHERE THE PROCESSING OF EACH CARD
    STARTS. THE PURPOSE IS TO TAKE THE INFOR-
    MATION FROM THE INPUT TAPE AND TRANSFER IT
    TO THE PRINTER AREA READY TO BE PRINTED AND
    ALSO EDIT IT INTO A FORM MORE DIGESTIBLE FOR
    ASSEMBLY PROCESSING.
    THE CARDS ARE REPRESENTED AS 20 WORDS ON
    TAPE. A ZONE WORD IMMEDIATELY PRECEDING ITS
    CORRESPONDING NUMERIC.
    0.1 LINE NUMBER
    2.3 A AR AH AS 1111123330
    4.5 M MR MH AS 1111123330
   6.7 C CR CH AS 1111123330
    B.9 OP IR
                 AS 1112000000
    10-19 REMARKS AS 0111111...
E1. CHECK LINE NO.
    IF THE LINE NUMBER IS NOT EXACTLY I HIGHER
   THAN THE PRECEDING. STOP THE MACHINE AND
   THEN RETURN TO E1.
E2. TRANSFER
   MOVE THE LEFT HALF OF THE CARD TO THE PRINTER
    AREA EDITING IT SLIGHTLY FOR READABILITY.
EJ. SEPARATE OFF R. H.
    EDIT THE A-AR-AH M-MR-MH C-CR-CH CHANGING
    THE SYMBOLIC PORTION TO A SINGLE WORD WITH
    THE ZONES AT THE LEFT: ZZZZZNNNNN:
   ACCUMULATE THE R DIGITS. AND PUT THE
   H-FIELD INTO THE FORM OUZZZOONNN.
E4. MOVE COMMENTS
   MOVE THE REMARKS FIELD INTO REGION R.
E5. CONSTRUCT CONSTANTS
   PUT TOGETHER THE M AND C FIELDS INTO
   POSITIVE CONSTANTS MC.MCZ.AND MCN AS THE
   CON NUM ZON CONTROL OPS ARE SUPPOSED TO DO.
E6. EDIT OF CODE.
   PUT THE OPERATION CODE FIELD INTO THE FORM
   88ZZZ88NNN. THIS FORM IS USED BECAUSE IT
   CANNOT CONFLICT WITH ANY SYMBOL IN THE
   SYMBOL TABLE.
   PUT THE IR FIELD INTO THE FORM ZOOODOONOO.
E7. INPUT BUFFER EMPTY
   IF THE CURRENT INPUT BUFFER IS NOT YET
   EMPTY. GO TO E9.
ES. SWAP BUFFERS
    AN INPUT BUFFER HAS ALREADY SEEN LOADED
    WE SWAP INPUT BUFFERS AND INITIATE READING IN
   TO THE EMPTY BUFFER.
E9. OP SRCH*.
   IF OP IS 'ON' GO TO CO.
   IF MASTER SWITCH IS OFF GO TO CT.
   ELSE SEARCH FOR OP-CODE IN THE SYMBOL TABLE.
    IF IT IS A CONTROL OP. GO TO CI.
   IF IT IS A MACHINE SYMBOLIC OP. GO TO THE
   MAIN PROCESSING ROUTINE PL.
   IF IT IS NOT IN THE TABLE, GIVE AN ERROR
   INDICATION AND CHANGE OF TO 57. GO TO PI.
```

Ci

Remington. Tand Univ Division of sperry rand corporation PHILADELPHIA, PA.

REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THERIN CONTAINED. IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS. FOR ANY PURPOSE, EXCEPT WITH THE WITTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION, UPON DEMAND.



L. PROCESS A ADDRESS. THIS ROUTINE IS USED FOR INSTRUCTIONS AND ALSO FOR CONTROL DPS CONINUM, AND ZON.

LI. CHECK BLANK A IF A IS NOT BLANK BUT THE PRECEDING INSTRUC-TION HAD A BLANK ADDRESS. GIVE AN ERROR INDICATION.

L2. FIND* A. FIND A (ROUTINE G). IF IT IS ALREADY DEFINED. GO TO L4.

L3. FARS+.DEFN+. A IS AN UNDEFINED ADDRESS. IF IT IS REGIONAL. LOCAL FORWARD. OR BLANK THIS IS AN ERROR CONDITION AND A NEW LOCATION IS ASSEMBLED. OTHERWISE USE THE LINE NUMBER AS RANDOM DRUM LEVEL AND GO THRU FARB+ (ROUTINE F) AND DEFN+ (ROUTINE D).

L4. ADJUST A LEVEL. IF THE NEW A ADDRESS MATCHES THE LAST M OR C ADDRESS. USE THEIR LEVEL. EXCEPT ON M ADDRESS MATCH WHERE THE C ADDRESS HAD UNDIGITS. IN THE LATTER CASE THE PREVIOUS C LEVEL IS USED. OTHERWISE USE THE A ADDRESS AS THE DRUM LEVEL

L5. ZERO TO BLANK. THE LOCATION 'BLANK' IS SET TO ZERO SINCE AT THIS POINT BLANK ADDRESSES ARE UNDEFINED. EXIT.

```
0808
   PI. PROCESS A
    0810
· 李春春春春春春春春春春春春春春春春春春春春春春春春春春春春春
   P2. CALCULATE M OPTIM :
· 我们会会会会会会会会会会会会会员。
    0822
                 -- ) YES1....)0
   P3. LITERAL
NO F
    0827
   P4. FIGURE INDEXING
   我们在我们的我们的 医皮肤 医皮肤 医皮肤 医皮肤 医皮肤皮肤 化
    0843
   P5. CREATE CONSTANT
· 我自我我们在我会的我们的我们的我们的我们的我们的我们的
   0857
               P6. FIND# M.
       UND: 1
   0861
P7. FARS+, DEFN+.
   0873
P8. ADJUST M LEVEL
0880
   P9. CALCULATE C OPTIM :
```

(--- | N---)

```
P. PROCESSING OF INSTRUCTIONS
PI. PROCESS A
    EXECUTE THE L ROUTINE.
P2. CALCULATE M OPTIM
    IF THE IR FIELD IS NON BLANK AND NOT A
    LITERAL. ADD 1 TO A LEVEL FOR INDEX REGISTER
    MODIFICATION TIME. THEN ADD THE APPROPRIATE
    AMOUNT TO GET THE OPTIMUM M ADDRESS LEVEL.
    AS DETERMINED BY THE OPERATION CODE.
    PUT THIS IN OPTIMO.
P3. LITERAL
    IF THE IR FIELD CONTAINS A NUMBER SIGN GO TO
     P5.
P4. FIGURE INDEXING
    ADJUST BIT 4 OF THE OPERATION CODE AND
    THE SIGN OF THE RESULT TO GIVE THE INDEX
    REGISTER MODIFICATION DESIRED. GO TO P6.
P5. CREATE CONSTANT
    GO THRU FARB+ AND AUST+ (ROUTINES F AND A)
    TO DETERMINE AN ADDRESS AND DRUM LEVEL FOR
    THE LITERAL CONSTANT. ASSEMBLE THE POSITIVE
    CONSTANT INTO THIS LOCATION. (ROUTINE O)
    TRANSFERRING THE MR DIGIT INTO AN AR DIGIT
    FOR THE CONSTANT.
    MARK THE C FIELD BLANK AND GO TO P9.
P6. FIND* M.
    FIND M(ROUTINE Q). IF IT IS ALREADY DEFINED.
    GO TO P8.
P7. FARB*. DEFN*.
    M IS AN UNDEFINED ADDRESS. IF IT IS
    REGIONAL OR LOCAL PLAIN THIS IS AN ERROR
    CONDITION AND ZERO IS ASSEMBLED. IF IT IS
    BLANK AND IF THE OP-CODE IS ONE THAT IGNORES
    M. * IS ASSEMBLED.
    OTHERWISE FARB* AND DEFN* (ROUTINES F.D.) ARE
    USED TO DEFINE M ON THE BASIS OF OPTIM AND
    THE MH-FIELD.
P8. ADJUST M LEVEL
    THE DRUM LEVEL AT THIS POINT IS NOW
    DETERMINED BY SUBROUTINE A.
P9. CALCULATE C OPTIM
    WE BEGIN TO WORK ON THE C ADDRESS NOW.
    THE OP CODE FOUND IN THE SYMBOL TABLE IS IN A
    SPECIAL FORMAT OPTSDOMMCC.
    HERE OP IS THE TWO DIGIT OPERATION CODE.
    5 IS 1 FOR IGNORE C. 2 FOR IGNORE M.
    MM AND CC ARE INCREMENTS FOR DETERMINING
   LATENCY. T IS THE TYPE OF LATENCY RULE
    REQUIRED. AS FOLLOWS:
   O: C IS MMCC FIXED LEVEL.
   1: C IS MMCC FIXED LEVEL.
```

2: C IS A+CC

P10.FIND* C.

THE RULE GIVEN BY T.

3: SHIFT COMMANDS C IS A+N+CC.

WE NOW CALCULATE OPTIM FOR C. ACCORDING TO

0903 P10.FIND* C. DEF:)0 UND: : 0907 Pli.FARS*, DEFN*. 0933 P12.ADJUST C LEVEL 0936 P13. SYNTHESIZE 0944 P14.ASSEMBLE 0953 1003 P16.FLOW CHART NO I 1008 P17. PRINT

FIND CIRCUTINE Q). IF IT IS ALREADY DEFINED. GO TO P12.

P11.FARB++DEFN+.

C IS AN UNDEFINED ADDRESS. IF IT IS REGIONAL OR LOCAL PLAIN. THIS IS AN ERROR CONDITION AND ZERO IS ASSEMBLED. IF IT IS BLANK AND THE OP-CODE IGNORES C. IT IS MADE EQUAL TO M. OTHERWISE FARB+ AND DEFN* (ROUTINES F.D) ARE ACTIVATED TO DEFINE C ON THE BASIS OF OPTIM. BLANK ADDRESS HERE MAY BE PUT IN BOOM OR BOOF REGION OF CORE.

P12.ADJUST C LEVEL THE DRUM LEVEL AT THIS POINT IS NOW DETERMINED BY SUBROUTINE A.

PIJ. SYNTHESIZE

THE OP. M AND C ARE NOW PUT TOGETHER INTO A TEN-DIGIT INSTRUCTION.

P14.ASSEMBLE USE ROUTINE O TO OUTPUT THE ASSEMBLED LINE OF CODE.

P15.EDIT THE ASSEMBLED INSTRUCTION IS EDITED AND SENT TO THE PRINTER AREA. FOR CONTROL OPERATIONS, HOWEVER, THIS PART IS SET TO BLANKS.

P16.FLOW CHART IF THE CONTROL OPERATION FLO HAS APPEARED EARLIER. GO TO THE FLOW-CHARTING ROUTINE X1.

P17. PRINT MOVE THE REMARKS TO THE PRINTER AREA FROM REGION R. TAKE ALL ERROR CONDITIONS THAT HAVE BEEN DETECTED AND PUT THEM ON THE LIST-ING. THERE IS ROOM FOR AT MOST 5 ERRORS. INTERROGATE THE PAGE-LINE COUNTER TO SEE IF A SKIP TO NEXT PAGE IS NECESSARY. FINALLY PRINT THE LINE, AND GET READY FOR THE NEXT LINE: GOING TO EL.

(--- IN---)

- C. CONTROL OPS.

 C1. BRANCH TO OP

 IF OP IS BLANK: GO TO P15.
 - FOR CON.NUM.ZON.ALF. GO TO C2.
 - FOR COR GO TO C4.
 - FOR EQU GO TO C5.
 - FOR HHH. SET MH INTO HTAG AND GO TO P15.
 - FOR OFF GO TO CE FOR FLO. SET FLOWCHARTING TAG ON AND GO TO
 - PIS ALSO.
 FOR PAT.PRINT THE AVAILABILITY TABLE AND
 - GO TO E1. FOR TYP, HALT AND INSERT RA IN TYPE OF PROG.
 - GO TO P15.

 IF AN ERROR OCCURS WHILE PROCESSING ONE OF THE ABOVE. NO ADDITIONAL ACTION TAKES PLACE
 - AND WE GO TO P15.
 FOR END. GO TO THE ENDING ROUTINE Z1.
- C2. PROCESS A
 USE ROUTINE L TO GET THE A ADDRESS:
 THEN USE THE IR FIELD TO INDICATE THE
 SIGN AND GO TO P14 TO ASSEMBLE THE INSTRUCT
- TION.

 C3. UPDATE AVAIL TABLE

 CHECK CH-FIELD FOR INCREMENT. IF BLANK.

 USE 1. ELSE USE CH MOD 100. FIND* M.

 IF UNDEFINED, ERROR. IF C IS BLANK. SET

 C EQUAL TO M. ELSE FIND* C. IF UNDEFINED.

 ERROR. FIND THE STARTING PLACE IN THE

 AVAILABILITY TABLE. AND KEEP RESERVING OR

 UNRESERVING ONE LOCATION AT A TIME

 UNTIL DONE. GO TO C5.
- C4. RESERVE CORE

 IF M IS UNDEFINED. OR THERE ISNT ENOUGH ROOM
 IN CORE THIS IS AN ERROR. OTHERWISE RESERVE
 THE SPACE IN CORE. AND GO TO C5.
- CS. DEFINE ADDRESS

 FIND A (ROUTINE G). IF DEFINED: OR IF A

 PAIR ADDRESS: THE A FIELD IS IN ERROR: ELSE

 IF NONBLANK DEFINE IT (ROUTINE D).

 GO TO P15.
- C6. ON OFF
 IF M ADDRESS MATCHES THE TYPE OF PROGRAM. THE
 MASTER SWITCH IS TURNED ON OR OFF. GO TO P15.
- C7. ASSEMBLER OFF
 IF FLOWCHARTING. GO TO E1.
 OTHERWISE PRINT THE WORD OFF ON THE LISTING.
 RETURNING TO P17.

| (===[N===) | • | 1 |
|---|---|----------|
| , ! | | 1 |
| 1262 |) | 1 |
| X1. WHAT DK FIELD |) G : P17 | 3 |
| · · · · · · · · · · · · · · · · · · · |) COD: | 1 |
| | K. 1 | 1 |
| • | OTHR | 1 |
| 0(****** | | 1 |
| 1305 | - 1 1 1 1 1 | 1 |
| X2. SCAN FOR # | | • |
| ŧ | | 1 |
| 0{************************************ | ************************************** | 1 |
| X3. TRANSFER REMARKS | | 1 |
| * | | 1 |
| 0(***** | ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; | 1 |
| 1447 : | | 1 |
| X4. COMPILE O1 OP | ********* P17 | 1 |
| | | 1 |
| 1464 1 | *************************************** | 1 |
| x5. COMPILE CONDITION | : : : : : : : : : : : : : : : : : : | 1 |
| | man (| 1 |
| 0(***** | •••••••• | 1 |
| 1456 1 | | 1 |
| X6. FINISH PREV SECTION | | X |
| • | | 1 |
| 1492 | | 1 |
| X7. INITIALIZE | ! | 1 |
| \$ ** ** ** ** ** ** ** ** ** ** ** ** ** | | 1 |

X. EXAMINE REMARKS FIELD
THIS ROUTINE IS ENTERED ON EVERY CARD EXCEPT
PAT AFTER FLO HAS APPEARED.
THE PURPOSE IS TO SEND INFORMATION TO PASS 3
FOR FLOWCHARTING. THIS INFORMATION IS
TRANSMITTED AS A 'MADE-UP-MACHINE' OR MUM
PSEUDOCODE. SPECIFICATIONS OF MUM GIVEN
IN THE PASS 3 LISTING.

- XI. WHAT OK FIELD COLUMNS 32-35 ARE THE DOCUMENTATION KEY OR DK FIELD. AND THEY CONTROL THE FLOWCHARTING OPER ATION. IF THE DK FIELD IS BLANK. GO TO X2. IF IT IS G. BLANK IT OUT AND GO TO PIT. G IS USED TO PUT REMARKS ON THE ASSEMBLY LISTING. IF IT IS CODI. THIS IS THE BEGINNING OF THE WORDS CODING DETAILS. TO XJ. IF IT IS TABL. THIS IS THE BEGINNING OF THE WORDS TABLE OF CONTENTS. COMPILE THE DK FIELD AS AN 03 OP IN MUM CODE. THIS SPECIAL CASE IS EXAMINED BY PASS 3. THEN GO TO X3. IF IT IS THE FORM K. THIS INDICATES A NEW SECTION WITH KEY K. GO TO X6. IF IT IS OF THE FORM KN. OR KNN. IT IS A NEW SUBSECTION NAME. CHECK THAT THEY ARE NUM-BERED SEQUENTIALLY AND IF NO ERROR GO TO X4. ANYTHING ELSE IS A CONDITION NAME. TO X5.
- X2. SCAN FOR #
 LOOK THROUGH ALL REMARKS FOR A NUMBER SIGN.
 GATHER TOGETHER THE SHARACTERS FOLLOWING IT.

 UP UNTIL THE NEXT CHARACTER WITH UNDIGITS.
 THE PRINTING CHARACTERS + AND / ARE NOT
 DELIMITERS. THE OTHERS ARE.) THIS FORMS THE
 BRANCH WORD. IF NO CONDITION PRECEDED.

 COMPILE AN 09 OP. IF THE BRANCH WORD REFERS
 TO THIS CHART. PUT M AND C INTO THE LAST
 COMPILES INSTRUCTION. PUT A RECORD FOR THIS
 ENTRY AND N IN THE STOP TABLE AS THE LAST
 BRANCH TO M. OTHERWISE. COMPILE THE BRANCH
 WORD INTO THE MUM CODE.
- X3. TRANSFER REMARKS

 IF THE REMARKS AREN'T ALL BLANK, COPY THEM

 ONTO THE COMMENTS TAPE 7. GO TO P17 UNLESS

 DK FIELD WAS X, IN WHICH CASE WE GO TO

 E1 DTRECTLY.
- X4. COMPILE OI OP COMPILE AN OI OP FOLLOWED BY THE LINE NUMBER. AND TRANSFER THE SUBSECTION NAME. COLUMNS 32-60. TO THE MUM CODE AREA AND THE COMMENTS TAPE ALSO. TO P17.
- X5. COMPILE CONDITION
 BLANK OUT THE DK FIELD. IF COLS 36-40 ARE
 BLANK THIS INDICATES A BRANCH TO THE NEXT
 SECTION SO AN OB OP IS SELECTED. OTHERWISE

THE LAST OP COMPILED IS INCREASED BY 1.

IF IT WAS AN O1. SELECT OP O6 ELSE SELECT
OP O5. FINALLY COMPILE THE SELECTED OP
FOLLOWED BY THE CONDITION NAME. GO TO X2
TO SCAN THE REST OF THE REMARKS.

- X6. FINISH PREV SECTION

 COMPILE 03 OP AND THEN PUT OUT A

 SENTINEL ON THE COMMENTS TAPE. WRITE THE
 STOP TABLE FOLLOWED BY ALL THE MUM CODE
 ON THE CONTROL TAPE 6. THERE IS ROOM FOR
 ABOUT 1500 LINES OF MUM CODE.
- X7. INITIALIZE

 RECORD THE NEW KEY LETTER SKIP TO THE NEXT

 PAGE ON THE ASSEMBLY LISTING.

 WRITE THIS LINE ON THE COMMENTS TAPE AND

 RETURN TO P17.

IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THREIN CONTAINED. IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WITTEN PERMISSION OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION.

| | (| IN) | | |
|-----|------------|---------------|---|---|
| | | 1 0(•••••• | • |) |
| 4 | 1546 | | 1 | ! |
| (- | B1. CHECK | |) HOLD) |) |
| • | GO: | 1 | , | |
| | 1550 | ‡ ‡ | | |
| | B2. READ 6 | COCK | 7 mm 10 mm g 2 3 | |
| | | 1 | • | |
| | 1564 | ; | | |
| : | B3. INITI | LIZE | 1 mar 40 mar of E | |
| | | 1 | | |
| | 1604 | 1 | | |
| : | 84. OUTPUT | GETS LOADE | [R : | |

```
EI
```

BEGINNING OF ASSEMBLY BI. CHECK INPUT TAPE IF INPUT TAPE ISNT READY . HALT AND RETURN TO 81. B2. READ BLOCK READ IN FIRST BLOCK INTO INPUT BUFFER UNLOAD FIRST TAPE BUFFER AND INITIATE READING SECOND BLOCK. THE INPUT TAPE IS ALWAYS READING ONE BLOCK AHEAD. THERE MUST THEREFORE BE AN EXTRA HASH BLOCK AFTER THE ENDING SENTINEL. EACH TAPE BLOCK CONTAINS 10 LINES. 83. INITIALIZE SET LOWER CORE AVAILABLE SET BLANK ADDRESS UNDEFINED SET FLO MODE OFF SET LINE COUNTERS TO ZERO SET FORWARD AND BACKWARD LOCAL TABLES (I AND J TABLES) TO UNDEFINED. SET DRUM STATUS SO THAT COOL TO 4999 ARE AVAILABLE SET HHH BLANK. 84. OUTPUT GETS LOADER WRITE LOADING ROUTINE ON OUTPUT TAPE. NEITHER TAPE IS EVER REWOUND BY THE PROGRAM. WE ARE NOW READY TO TAKE OFF. GOING TO E1.

| 1609 | |
|--|---|
| ZI. FIND* | |
| | 1 |
| 1612 | * |
| ZZ. ASSEMBI | E TRANSFER |
| | ! |
| 1616 | • |
| Z3. CLEAN | OUTPUT BUFFER.: |
| | 1 |
| 1621 | ; ; |
| and the same and and are a second as a | |
| Z4. EJECT F | APER : |
| 1 74. F. IECT 1 | APER : |
| 24. EJECT F | APER : |
| 24. EJECT F | APER : |
| 24. EJECT F | APER : |
| 1623 | FLO |
| 1623 | FLO |
| 1623 25. FINISH | APER : |
| 1623 | FLO |

(--- IN---)

Z. ENDING OF ASSEMBLY.

Z4. EJECT PAPER

- Z1. FIND* M. FINO M. IF UNDEFINED. HALT AND THE OPERATOR IS SUPPOSED TO FILL RA WITH THE RIGHT THING.
- Z2. ASSEMBLE TRANSFER ASSEMBLE HLT HHHH MLOC INTO LOCATION 0105 WHICH WILL CAUSE THE LOADING TO STOP WITH THIS INSTRUCTION.
- Z3. CLEAN OUTPUT BUFFER. WRITE THE LAST BUFFER LOAD ON THE OUTPUT TAPE. PRINT THE END LINE AND THE ERROR INDICATION ON THIS LINE IS BLANK IF AND ONLY IF NO ERRORS OCCURRED DURING ASSEMBLY.
- SKIP THE PRINTER PAPER ABOUT 2 PAGES AHEAD. 25. FINISH FLO FINISH PROCESSING THE LAST SECTION OF FLOW-CHART. IF ANY (SEE X6. EXCEPT COMPILE 04 INSTEAD OF 03 OP).
- Z6. HALT HALT THE COMPUTER. PASS 2 IS FINISHED.
- 27. FLOWCHARTING IF NOT FLOWCHARTING. LOAD THE ASSEMBLED PROGRAM. IF FLOWCHARTING. GO ON TO PASS3.